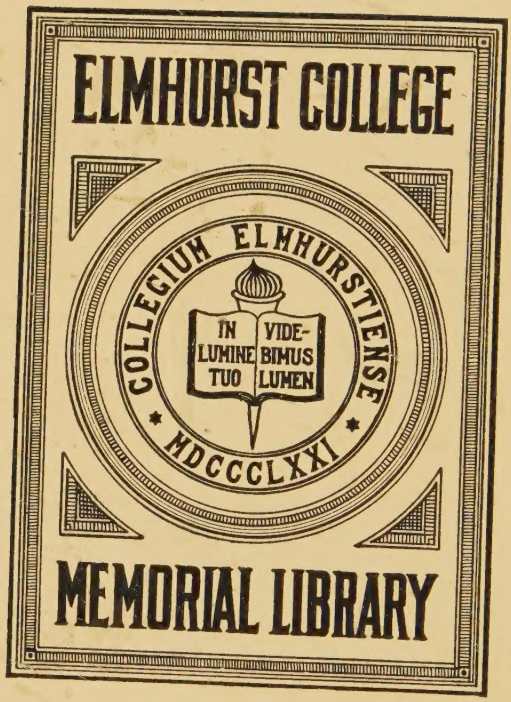
ELMHURST COLLEGE LIBRARY
572T368
SOURCE BOOK FOR SOCIAL ORGINS$ 4TH ED.$
C005
3 2311 00069 430 0


ELMHURST COLLEGE
COLLEGIUM ELMHURSTIENSE
IN LUMINE TUO
VIDEBIMUS LUMEN
MDCCCLXXI
MEMORIAL LIBRARY

SOURCE BOOK FOR SOCIAL ORIGINS

ETHNOLOGICAL MATERIALS, PSYCHOLOGICAL STANDPOINT
CLASSIFIED AND ANNOTATED BIBLIOGRAPHIES
FOR THE INTERPRETATION OF SAVAGE SOCIETY

BY

WILLIAM I. THOMAS

Author of *Sex and Society*, *Polish Peasant*

SIXTH EDITION

In good sooth, my masters, this is no door. Yet is it a little window, that looketh upon a great world.
—Quoted in RISLEY, *The People of India*, title-page

BOSTON

RICHARD G. BADGER

THE GORHAM PRESS

COPYRIGHT 1909 BY RICHARD G. BADGER

All Rights Reserved

THE GORHAM PRESS, BOSTON, U. S. A.

372
T368

WILLIAM JONES

KILLED IN LUZON

55300

Digitized by the Internet Archive
in 2026

https://archive.org/details/sourcebookforsoc0000will_f0e4

PREFACE

This book will be found very interesting, if read slowly. It had its origin in the necessities of the classroom, but in its preparation I have had a growing hope that it may be a means of extending the interest in the beginnings of human society to a larger public. The study of savage and prehistoric man is one of the most fascinating and important of the social sciences, and at the same time one of the most esoteric. It is not only inherently delightful, but, as I have attempted to indicate in the introductory chapter, it has a vital though incompletely realized relation to historical, sociological, and pedagogical studies. On every score it deserves a wider recognition, and I should be happy if I could assist it to come into its own. It is impossible, at any rate, that the scientific and comparative method connected with the movement we call Darwinism should not in the long run be extended to the study of man himself.

Human activities cannot be isolated or arranged according to any fixed order of development. Any one of them is related to all the others. But for convenience I have grouped the materials I have been able to include in the space at my command in seven parts, the external environment and the mind of man coming first, and the activities growing out of these following in a more or less arbitrary order.

In the choice of the papers which form the bulk of the book the proportion of bare fact and of more generalized statement has of course been a problem, and it has turned out that most of the selections have a thread

of interpretation running through the facts. I have not even excluded views which seem to me wrong, but have attempted to offset them by different views of other writers, by suggestions at the end of the different sections, and by references to the bibliographies.

The fact that I have in more than one place used rather lengthy passages from Herbert Spencer, while at the same time taking special pains to discredit his views, seems to call for a word of explanation. Whatever errors Spencer's *Principles of Sociology* may contain, it still remains the most systematic and considerable attempt to interpret society as an evolution. And both the originality and the inadequacy of his views have greatly stimulated scientific inquiry. It is also true that while many of Spencer's views are ignored by ethnologists they still remain the only ones with which a large number of persons are acquainted. I have therefore given him a representation, both for these reasons and because the truth is always more clearly developed when compared with a statement of error.

In printing the selections no attempt has been made to conform the spelling and punctuation to any standard. The text has been followed literally, and such spellings as "labour" in English editions have been retained. Many of the papers contained in the original copious footnotes, citing authorities. The notes on some of the pages of Westermarck, for instance, amount to more than the text. It was obviously not feasible to reprint these notes here. When the student wishes to see the authority for a statement he will usually find it indicated in the original text.

I will not comment on the proportion of space given to the bibliographies. It might have been more or less.

The teacher, at any rate, will certainly not find the lists too large when he comes to comb out from them the titles to be found in his college library. In connection with the lists I wish to call attention to the following points:

1. The bibliographies of the different parts have reference to the types of activity there treated, without regard to race. Wherever a title bears on an activity it is included in one of these bibliographies. The supplementary bibliographies at the end of the book contain more general titles arranged by races and countries. In these lists the student may locate further materials on the activities represented in the text. If, for instance, he is interested in the mind of the savage he should first use the bibliography of Part II, and then the supplementary bibliographies. Or, on the other hand, if he is interested in the Indian, he should use bibliography 8 in connection with whatever titles he finds on the Indian in bibliographies 1 to 7.

2. In any library it is easy to locate the ethnological books, but the papers in the journals are not usually listed separately in the library catalogue. In the presence of the 38 volumes of the *Journal of the Royal Anthropological Institute of Great Britain and Ireland* the inexperienced searcher for anthropological information on any point is at a loss. He knows there is something there, but he cannot get any farther. I have therefore made a point of differentiating and listing in the bibliographies the important papers in the more important journals. The *American Anthropologist* and the above-mentioned *Journal of the Anthropological Institute* are among the publications treated in this way. But the most important feature of the bibliographies

for the reader who does not live near a large library is the similar listing of practically all the important anthropological papers in the *Reports of the Bureau of American Ethnology* and in the *Annual Reports of the Smithsonian Institution* and of the *U. S. National Museum.* These are government publications, widely distributed and very generally accessible. They also contain materials of the highest value.

3. In the case of a few important books which are or ought to be in every library, I have also differentiated the contents, and listed the titles of important chapters in the bibliographies of the seven parts of the book. This treatment, however, is only indicated and the student should extend it to the supplementary bibliographies.

The titles in the bibliographies are numbered, mainly to facilitate reference in class-work. The stars indicate my judgment of the more important titles. The fact that there are occasional gaps in the numbers does not mean that anything has been lost at that point, but is due to the fact that titles were dropped out after the lists were in type. In connection with every bibliography the student will find some indication of points at which he may lay hold, both in the remarks preceding the list and particularly in the comments attached to certain titles.

If I may express a wish in this connection it is that our libraries, especially the smaller ones, will soon meet the growing public interest in anthropological subjects by the provision of at least a minimum number of the more recent and important works. The literature of anthropology is very large, almost comparable in volume to that of history, but the government publications men-

tioned above form a valuable beginning. To these should certainly be added the *American Anthropologist,* and, if possible, the *Journal of the Anthropological Institute,* and the *Journal of American Folk-Lore.* The anthropological papers in the *Memoirs of the American Museum of Natural History* are also of the greatest importance for America. If, in addition to such a collection of periodicals, a library will acquire even fifty selected books, it will be almost decently equipped for work on early society. For the sake of definiteness I have arranged a list of 100 books (bibliography 14) from which such a selection may be made.

The teaching profession is at present manifesting a general interest in anthropological subjects, on account of the relation of the child to the race, and for the benefit of those who wish to examine this book from that standpoint, I suggest that the introductory chapter and Parts II, III, and V, and the bibliographies of those parts, will interest them most. Also Part I, selections 1 and 8, Part VI, selections 1 and 3, Part VII, selections 5, 6, and 7.

I wish to express my thanks to the publishers who have generously permitted me to reprint certain papers, and to authors for the same courtesy. I appreciate also the unfailing good nature with which *The John Crerar Library* and the *Library of the Field Museum of Natural History* have always met my unusual demands on their rich materials.

The decoration on the front of the cover is from a carving on a drum from New Guinea, and the one on the back is from a canoe of the same region, and represents a human face.

W. I. T.

The University of Chicago

LIST OF ABBREVIATIONS

Titles in the supplementary bibliographies (8–14) are in some cases more contracted than in Bibliographies 1–7. The shorter form is given here. Places of publication are abbreviated only in Bibliographies 8–14.

Abhandl.	=Abhandlungen
Am.	=American
Ann.	=Annual
Anth.	=Anthropology, Anthropologie, Anthropological, Anthropologische
App.	=Appendix
Arch.	=Archaeology, Archiv, Archives
Art.	=Article
B.	=Berlin
Br.	=Brussels
Bul.	=Bulletin
Bur.	=Bureau
C.	=Chicago
Contr.	=Contributions
Ed.	=Edited, Edition
Edin.	=Edinburgh
Ethn.	=Ethnology, Ethnologie
Ethnog.	=Ethnography, Ethnographie
Frankf.	=Frankfort
Gen.	=General
Gesells.	=Gesellschaft
Inst.	=Institute, Institution
Jahrb.	=Jahrbuch
Jl.	=Journal
K.	=Königlich, Kaiserlich
K.K.	=Kaiserlich-Königlich
L.	=London
Ley.	=Leyden
Lpz.	=Leipzig
Mitth.	=Mittheilungen
Nat.	=National, Natural
N. F.	=Neue Folge
N. S.	=New Series
P.	=Paris
Pap.	=Papers
Ph.	=Philadelphia
Pol.	=Political
Proc.	=Proceedings
Psyc.	=Psychology, Psychological
Quar.	=Quarterly
Rep.	=Report
Rev.	=Review, Revue
Roy.	=Royal
San. Fr.	=San Francisco
Sci.	=Science, Sciences
Ser.	=Series
Smiths.	=Smithsonian
Soc.	=Society, Société
Socialwiss.	=Socialwissenschaft
St. P.	=St. Petersburg
Tr.	=Translation
Trans.	=Transactions
V.	=Vienna
Zeits.	=Zeitschrift

CONTENTS

PAGE

INTRODUCTORY 3

PART I: THE RELATION OF SOCIETY TO GEOGRAPHIC AND ECONOMIC ENVIRONMENT

TECHNOGEOGRAPHY, OR THE RELATION OF THE EARTH TO THE INDUSTRIES OF MAN 29
O. T. MASON.

SITUATION AND NUMBERS OF THE HUMAN RACE 45
F. RATZEL.

THE OPERATION OF GEOGRAPHIC FACTORS IN HISTORY . 47
ELLEN C. SEMPLE.

[INFLUENCE OF A DESERT ENVIRONMENT.] 55
W J MCGEE.

[SOCIAL LIFE IN AN ARCTIC ENVIRONMENT.] 74
WILLIAM J. SUMNER.

AGRICULTURE AND CATTLE-BREEDING 92
F. RATZEL.

ON THE ORIGIN OF AGRICULTURE 98
H. LING ROTH.

THE ECONOMIC LIFE OF PRIMITIVE PEOPLE 112
CARL [KARL] BÜCHER.

COMMENT ON PART I 130

BIBLIOGRAPHY 134

PART II: MENTAL LIFE AND EDUCATION

THE MIND OF PRIMITIVE MAN 143
FRANZ BOAS.

[THE MIND OF THE SAVAGE.] 155
W. I. THOMAS.

INTERPRETATION OF SAVAGE MIND 173
JOHN DEWEY.

PRIMITIVE MAN—EMOTIONAL 186
HERBERT SPENCER.

PAGE

PRIMITIVE MAN—INTELLECTUAL 200
HERBERT SPENCER.

[EDUCATION OF THE AUSTRALIAN BOY THROUGH INITIATION CEREMONIES.] 213
A. W. HOWITT (213–34); SPENCER AND GILLEN (234–58).

[EFFECT OF AUSTRALIAN EDUCATION AS SHOWN IN FOOD REGULATIONS.] 258
A. W. HOWITT.

AUSTRALIAN MESSENGERS AND MESSAGE-STICKS . . . 264
A. W. HOWITT.

THE RELATION OF THE MEDICINE MAN TO THE PROFESSIONAL OCCUPATIONS 281
W. I. THOMAS.

THE GROWTH OF INDIAN MYTHOLOGIES 303
FRANZ BOAS.

COMMENT ON PART II 316

BIBLIOGRAPHY 318

PART III: INVENTION AND TECHNOLOGY

TOOLS AND MECHANICAL DEVICES 335
O. T. MASON.

PRIMITIVE WARFARE 373
A. LANE-FOX PITT-RIVERS.

ON THE ORIGIN OF THE PLOUGH AND THE WHEEL-CARRIAGE 399
E. B. TYLOR.

EARLY MODES OF NAVIGATION 404
A. LANE-FOX PITT-RIVERS.

INVENTION AND DISCOVERY 426
F. RATZEL.

COMMENT ON PART III 436

BIBLIOGRAPHY 440

PART IV: SEX AND MARRIAGE

THE ORIGIN AND ANTIQUITY OF HUMAN MARRIAGE . . 447
EDWARD WESTERMARCK.

AUSTRALIAN MARRIAGE 468
SPENCER AND GILLEN.

PAGE

Polyandry among the Todas 483
W. H. R. Rivers.

Marriage by Purchase and Liberty of Choice . . . 489
Edward Westermarck.

Monogamy 509
Herbert Spencer.

[Sexual Antagonism and Taboo.] 512
Ernest Crawley.

Comment on Part IV 530

Bibliography 535

PART V: ART, ORNAMENT, AND DECORATION

[Point of View for Study of Primitive Art.] . . . 543
A. C. Haddon.

Clothing and Ornament 549
F. Ratzel.

Form and Ornament in Ceramic Art 558
W. H. Holmes.

The Dance 577
Ernst Grosse.

Primitive Drama and Pantomime 593
R. Wallaschek.

[Relation of Art to the Control of Life.] 605
Yrjö Hirn.

Comment on Part V 635

Bibliography 636

PART VI: MAGIC, RELIGION, MYTH

Sympathetic Magic 651
J. G. Frazer.

Australian Medicine Men and Magic 669
A. W. Howitt.

The Algonkin Manitou 683
William Jones.

Animism 692
E. B. Tylor.

PAGE

[The "Ghost-Theory" of the Origin of Religion.] . 704
Herbert Spencer.

Comment on Part VI 733

Bibliography 736

PART VII: SOCIAL ORGANIZATION, MORALS, THE STATE

The State 753
F. Ratzel.

Australian Tribal Government 764
A. W. Howitt.

The Authority of Old Men in Australia 788
Spencer and Gillen.

[Tribal Secret Societies.] 792
Hutton Webster.

The Iroquois Confederacy 803
L. H. Morgan.

Wyandot Government 823
J. W. Powell.

Hospitality of the American Indians 835
L. H. Morgan.

Comment on Part VII 856

Bibliography 859

SUPPLEMENTARY BIBLIOGRAPHIES

General Bibliographical Suggestions 873

8. America 874

9. Africa 883

10. Australia and Tasmania 891

11. Oceania and the Malay Archipelago 894

12. Asia and Japan 901

13. Europe 905

14. Books for Purchase 908

Index of Names in Bibliographies 919

General Index 927

INTRODUCTORY

INTRODUCTORY

I

The general acceptance of an evolutionary view of life and the world has already deeply affected psychology, philosophy, morality, education, sociology, and all of the sciences dealing with man. This view involves a recognition of the fact that not a single situation in life can be completely understood in its immediate aspects alone. Everything is to be regarded as having an origin and a development, and we cannot afford to overlook the genesis and the stages of change. For instance, the psychologist or the neurologist does not at present attempt to understand the working or the structure of the human brain through the adult brain alone. He supplements his studies of the adult brain by observations on the workings of the infant mind, or by an examination of the structure of the infant brain. And he goes farther than this from the immediate aspects of his problem—he examines the mental life and the brain of the monkey, the dog, the rat, the fish, the frog, and of every form of life possessing a nervous system, down to those having only a single cell; and at every point he has a chance of catching a suggestion of the meaning of brain structure and of mind. In the lower orders of brain the structure and meaning are writ large, and by working up from the simpler to the more complex types, and noting the modification of structure and function point by point, the student is finally able to understand the frightfully intricate human organ, or has the best chance of doing so. Similarly the biological sciences

practice a rigid genetic and comparative method. The recognize life as a continuum, and they pay more attention to its simpler manifestations, perhaps, than to its higher, because the beginning of the whole process is most significant. They are there nearer to the source and secret of life itself.

But it is a somewhat singular fact that while the social sciences have been profoundly influenced by the theory of evolution as developed by the biologists, and have imitated the methods developed by the biological sciences in the study of plant and animal life, they have generally failed to connect their studies of society with the researches of anthropology and ethnology, that is, with those sciences which stand between biology and civilization. And yet the lessons which the sciences dealing with man in historical time have to learn from the life of the lower human races are even more important than those which they have learned from biology.

It is of course entirely proper for the student to limit himself even very narrowly to a special field in order to work it intensively, but the historian, for instance, who begins the study of human activity with Greece and Rome or even with Assyria and Egypt, cuts himself off as completely from the beginnings of his own subject as would the psychologist who neglected all study of child-psychology and of animal mind, or the biologist who attempted to understand bird or insect life without a knowledge of the stages of life lying below these. Indeed, when we consider that the human race is one, that human mind is everywhere much the same, and that human practices are everywhere of the same general pattern, it appears that the neglect of the biologist or psychologist to study types of life lower than those

in which he is immediately interested could hardly be so serious as the neglect of the historian to familiarize himself with the institutional life of savage society.

This failure of the social sciences to regard human life and human history as a whole, and to perceive the significance of the savage for any study of civilization has been touched upon by Professor Robinson in his brilliant essay on *History,* and I quote his words extensively, particularly since they introduce the question of a modification of the method of viewing historical materials:

"Fifty years ago it was generally believed that we knew something about man from the very first. Of his abrupt appearance on the freshly created earth and his early conduct, there appeared to be a brief but exceptionally authoritative account. Now we are beginning to recognize the immense antiquity of man. There are paleolithic implements which there is some reason for supposing may have been made a hundred and fifty thousand years ago; the eolithic remains recently discovered may perhaps antedate the paleolithic by an equally long period. Mere guesses and impressions, of course, this assignment of millenniums, which appear to have been preceded by some hundreds of thousands of years during which an animal was developing with 'a relatively enormous brain case, a skilful hand and an inveterate tendency to throw stones, flourish sticks' and, in general, as Ray Lankester expresses it, 'to defeat aggression and satisfy his natural appetites by the use of his wits rather than by strength alone.' There may still be historians who would argue that all this has nothing to do with history;—that it is 'prehistoric.' But 'prehistoric' is a word that must go the way of

'preadamite,' which we used to hear. They both indicate a suspicion that we are in some way gaining illicit information about what happened before the foot lights were turned on and the curtain rose on the great human drama. Of the so-called 'prehistoric' period we of course know as yet very little indeed, but the bare fact that there was such a period constitutes in itself the most momentous of historical discoveries. The earliest, somewhat abundant, traces of mankind can hardly be placed earlier than six thousand years ago. They indicate, however, a very elaborate and advanced civilization and it is quite gratuitous to assume that they represent the first occasions on which man rose to such a stage of culture. Even if they do, the wonderful tale of how the conditions of which we find hints in Babylonia, Egypt, and Crete came about is lost.

"Let us suppose that there has been something worth saying about the deeds and progress of mankind during the past three hundred thousand years at least; let us suppose that we were fortunate enough to have the merest outline of such changes as have overtaken our race during that period, and that a single page were devoted to each thousand years. Of the three hundred pages of our little manual the closing six or seven only would be allotted to the whole period for which records, in the ordinary sense of the word, exist, even in the scantiest and most fragmentary form. Or, to take another illustration, let us imagine history under the semblance of a vast lake into whose rather turbid depths we eagerly peer. We have reason to think it at least twenty-five feet deep, perhaps fifty or a hundred; we detect the very scantiest remains of life, *rara et disjecta,* four or five feet beneath the surface, six or

seven inches down these are abundant, but at that depth we detect, so to speak, no movements of animate things, which are scarcely perceptible below three or four inches. If we are frank with ourselves we shall realize that we can have no clear and adequate notion of anything happening more than an inch,—indeed, scarce more than half an inch below the surface.

"From this point of view the historian's gaze, instead of sweeping back into remote ages when the earth was young, seems now to be confined to his own epoch. Rameses the Great, Tiglath-Pileser, and Solomon appear practically coeval with Caesar, Constantine, Charlemagne, St. Louis, Charles V, and Victoria; Bacon, Newton, and Darwin are but the younger contemporaries of Thales, Plato, and Aristotle. Let those pause who attempt to determine the laws of human progress or decay. It is like trying to determine by observing the conduct of a man of forty for a month, whether he be developing or not. Anything approaching a record of events does not reach back for more than three thousand years and even this remains shockingly imperfect and unreliable for more than two millenniums. We have a few, often highly fragmentary, literary histories covering Greek and Roman times, also a good many inscriptions and some important archeological remains; but these leave us in the dark upon many vital matters. The sources for the Roman Empire are so very bad that Mommsen refused to attempt to write its history. Only in the twelfth and thirteenth centuries do the mediaeval annals and chronicles begin to be supplemented by miscellaneous documents which bring us more directly into contact with the life of the time.

"Yet the reader of history must often get the impression that the sources of our knowledge are, so to speak, of a uniform volume and depth, at least for the last two or three thousand years. When he beholds a voluminous account of the early Church, or of the Roman Empire, or observes Dahn's or Hodgkin's many stately volumes on the Barbarian invasions, he is to be pardoned for assuming that the writers have spent years in painfully condensing and giving literary form to the abundant material which they have turned up in the course of their prolonged researches. Too few suspect that it has been the business of the historian in the past not to condense but on the contrary skilfully to inflate his thin film of knowledge until the bubble should reach such proportions that its bright hues would attract the attention and elicit the admiration of even the most careless observer. One volume of Hodgkin's rather old fashioned 'Italy and her Invaders,' had the scanty material been judiciously compressed, might have held all that we can be said to even half-know about the matters to which the author has seen fit to devote eight volumes.

"But pray do not jump to the conclusion that the historical writer is a sinner above all men. In the first place, it should never be forgotten that he is by long tradition a man of letters, and that that is not, after all, such a bad thing to be. In the second place he experiences the same strong temptation that everyone else does to accept, at their face value, the plausible statements which he finds, unless they conflict with other accounts of the same events or appear to be inherently improbable.

"To take an illustration of Nietzsche's, the vague

feeling, as we lie in bed, that the soles of our feet are free from the usual pressure to which we are accustomed in our waking hours demands an explanation. Our dream explanation is that we must be flying. Not satisfied to leave its work half done, dream logic fabricates a room or landscape in which we make our aerial experiments. Moreover just as we are going to sleep or awaking we can often actually observe how a flash of light, such as sometimes appears on the retina of our closed eyes, will be involuntarily interpreted as a vision of some human figure or other object, clear as a stereopticon slide. Now anyone can demonstrate to himself that neither dream logic nor the 'mind's-eye faculty,' as it has been called, desert us when we are awake. Indeed they may well be, as Nietzsche suspects, a portion of the inheritance bequeathed to us, along with some other inconveniences, by our brutish forebears. At any rate they are forms of aberration against which the historian, with his literary traditions, needs specially to be on his guard. There are rumors that even the student of natural science sometimes keeps his mind's eye too wide open, but he is by no means so likely as the historian to be misled by dream logic. This is not to be ascribed necessarily to the superior self-restraint of the scientist but rather to the greater simplicity of his task and the palpableness of much of his knowledge. The historian can almost never have any direct personal experience of the phenomena with which he deals. He only knows the facts of the past by the traces they have left. Now these traces are usually only the reports of someone who commonly did not himself have any direct experience of the facts and who did not even take the trouble to tell us where he got his alleged information.

This is true of almost all the ancient and mediaeval historians and annalists. So it comes about that 'the immense majority of the sources of information which furnish the historian with starting points for his reasoning are nothing else than traces of psychological operations,' rather than direct traces of the facts.

"To take a single example from among thousands which might be cited, Gibbon tells us that after the death of Alaric in 410 'the ferocious character of the Barbarians was displayed in the funeral of the hero, whose valor and fortune they celebrated with mournful applause. By the labor of a captive multitude they forcibly diverted the course of the Busentinus, a small river that washes the walls of Consentia. The royal sepulchre, adorned with the splendid spoils and trophies of Rome, was constructed in the vacant bed; the waters were then restored to their natural channel, and the secret spot, where the remains of Alaric had been deposited, was forever concealed by the inhuman massacre of the prisoners who had been employed to execute the work.' The basis of this account is the illiterate 'History of the Goths' written by an ignorant person, Jordanes, about a hundred and forty years after the occurrence of the supposed events. We know that Jordanes copied freely from a work of his better instructed contemporary, Cassiodorus, which has been lost. This is absolutely all that we know about the sources of our information.

"Shall we believe this story which has found its way into so many of our textbooks? Gibbon did not witness the burial of Alaric nor did Jordanes, upon whose tale he greatly improves, nor did Cassiodorus who was not born until some eighty years after the death of the

Gothic king. We can control the 'psychological operation' represented in Gibbon's text, for he says he got the tale from Jordanes, but aside from our suspicion that Jordanes took the story from the lost book by Cassiodorus we have no means of controlling the various psychological operations which separate the tale as we have it from the real circumstances. We have other reasons than Jordanes' authority for supposing that Alaric is dead, but as for the circumstances of his burial we can only say they may have been as described, but we have only the slightest reason for supposing that they were. The scope for dream logic and the mind's-eye faculty as well as for mistakes and misapprehensions of all kinds is in such cases infinitely greater than when one deals with his own impressions, which can be intensified and corrected by repeated observations and clarified by experiment.

"It should now have become clear that history can never become a science in the sense that physics, chemistry, physiology, or even anthropology, is a science. The complexity of the phenomena is appalling and we have no way of artificially analyzing and of experimenting with our facts. We know absolutely nothing of any occurrences in the history of mankind during thousands of years and it is only since the invention of printing that our sources have become in any sense abundant. Historical students have moreover become keenly aware of the 'psychological operations' which separate them from the objective facts of the past. They know that all narrative sources, upon which former historians so naïvely relied, are open to the gravest suspicion and that even the documents and inscriptions which they prize

more highly are nevertheless liable to grave misinterpretation."

I think, then, we must frankly despair of ever reconstructing the past history of man in a complete and particularistic fashion. Whether certain incidents transpired as is set down in the records or handed down in tradition we can never know. The folk-mind is highly imaginative and anecdotal. It has always possessed the appetite for the sensational, the morbid, and the marvelous which is at present so successfully catered to by the yellow section of the daily press. It has created many picturesque situations, but it is not an organ for scientific observation.

I suppose it is even true that the myth, superstition, and magical practice of the savage have a more certain value for the study of the history of man than the written record. The printed page is deceitful, but the myth cannot deceive. What it narrates is not true, but the student is not deceived. And the mere existence of the myth is one of the great facts in this history of mind which must be recognized if we are to understand the present state of social consciousness. This is a point on which Professor Tylor has insisted. And as the historian abandons or relaxes his effort to establish a particular order of incidents in the past and turns his attention rather to the establishment of certain general principles of change, he will find himself greatly assisted by a knowledge of the life of the non-civilized races. It is true that the savage never became civilized, and the claim is sometimes made that he therefore has no significance for the study of civilization. But the animal never became human, and it is far from true that the animal on that account has no significance for

psychology. And the savage is much closer to the white than the animal is to man. Indeed I believe that the reader who divests himself as far as possible of prepossessions and race-prejudice and reads the selections in this volume, especially those in Part II, will conclude that the savage is very close to us indeed, both in his physical and mental make-up and in the forms of his social life. Tribal society is virtually delayed civilization, and the savages are a sort of contemporaneous ancestry.

I do not, of course, wish to belittle the effort of the historian to establish his facts, but to the young person who is planning to go into history, economics, civics, education, or psychology, I do wish to make this suggestion: If he will plan his work with reference to gaining (1) a sound and comprehensive knowledge of biology, (2) an even more particular knowledge of psychology, and (3) a very intimate knowledge of anthropology and ethnology, he will find himself in possession of an apparatus which will enable him to do a rare class of work in his special field. It is for such a person that this volume is prepared, quite as much as for the student of sociology.

II

But I wish chiefly at this point to indicate a standpoint which will assist the student in the interpretation of the materials in the body of this volume, and which he can bring to bear also on the literature indicated in the bibliographies.

There have been many notable attempts to interpret the social process in terms of so-called elemental or dominant social forces. Among these may be men-

tioned Tarde's "imitation," Gumplowicz's "conflict," Durkheim's "constraint," De Greef's "contract," and Giddings' "consciousness of kind." Now it is evident that the social process is a complex, and cannot be interpreted by any single phrase. It includes all of the forces mentioned above, and more. "Imitation" is a powerful social factor, but it is hardly more important than inhibition. The "thou shalt nots" have played a large rôle in the life of the race, as they do still in the life of the individual. Similarly "conflict" and "contract" offset each other, and "consciousness of kind" is hardly more conspicuous as a social force than consciousness of difference. The reader who is interested in theories of the social process will find them fully discussed in Professor Small's *General Sociology*.

There is, however, a useful concept into which all activity can be translated, or to which it can at least be related, namely, *control*. Control is not a social force, but is the object, realized or unrealized, of all purposive activity. Food and reproduction are the two primal necessities, if the race is to exist. The whole design of nature with reference to organic life is to nourish the individual and provide a new generation before the death of the old, and the most elementary statement, as I take it, which can be made of individual and of social activity is that it is designed to secure that control of the environment which will assure these two results. I will illustrate my meaning by applying the concept of *control* to some of the steps in organic and social development.

The animal differs from the plant primarily in its superior control of the environment, secured through the power of motion. It does not wait for food, but

goes after it. In this connection we have an explanation of the organs of sense and of prehension which characterize the animal. All the multitudinous and varied structures of animal life will, indeed, be found to answer to peculiar modes of control which are secured to the animal through them. In man the principle of motion and consequent control is extended through the use of animals and the various means of mechanical transportation which he has developed. With the use of free hands man immensely increased his control, through the ability to make and use weapons and tools. Fire is a very precious element in control, since through its use man was able to transform inedible into edible materials, to smelt and forge iron, and to enlarge the habitable world by regulating the temperature of the colder regions. Mechanical invention is to be viewed as control. It utilizes new forces or old forces in new ways, making them do work, and assist man in squeezing out of nature values not before suspected, not within reach, or not commonly enjoyed. The gregariousness of animals and the associated life of men are modes of control, because numbers and co-operation make life more secure. Language is a powerful instrument of control, because through it knowledge, tradition, standpoint, ideals, stimulations, copies, are transmitted and increased. Forms of government are aids to control, by providing safety and fair play within the group and organized resistance to intrusions from without. Religion assists control, reinforcing by a supernatural sanction those modes of behavior which by experience have been determined to be moral, i. e., socially advantageous. Art aids control by diffusing

admirable copies for imitation, with the least resistance and the maximum of contagion. Play is an organic preparation and practice for control. Marriage secures better provision and training to children than promiscuity. Medicine keeps the organism in order or repairs it. Liberty is favorable to control, because with it the individual has opportunity to develop ideas and values by following his own bent which he would not develop under repression. The human mind is pre-eminently the organ of manipulation, of adjustment, of control. It operates through what we call knowledge. This in turn is based on memory and the ability to compare a present situation with similar situations in the past and to revise our judgments and actions in view of the past experience. By this means the world at large is controlled more successfully as time goes on. Knowledge thus becomes the great force in control, and those societies are the most successful and prosperous in which the knowledge is most disseminated, most reliable, and most intensive. This is the sense in which knowledge is power. And as to morality, if we should single out and make a catalogue of actions which we are accustomed to call laudable and virtuous, we should see that they can all be stated from the control standpoint. But I will not multiply instances, and I need not point out that all conflict, exploitation, showing off, boasting, gambling, and violation of the decalogue, are designed to secure control, however unsuccessful in the end.

There is, however, a still more serviceable standpoint for the examination of society and of social change, and that is *attention*. This is by no means in conflict with the category of *control*. Control is the

end to be secured and attention is the means of securing it. They are the objective and subjective sides of the same process. Attention is the mental attitude which takes note of the outside world and manipulates it; it is the organ of accommodation. But attention does not operate alone; it is associated with habit on the one hand and with crisis on the other. When the habits are running smoothly the attention is relaxed; it is not at work. But when something happens to disturb the run of habit the attention is called into play and devises a new mode of behavior which will meet the crisis. That is, the attention establishes new and adequate habits, or it is its function to do so.

Such conditions as the exhaustion of game, the intrusion of outsiders, defeat in battle, floods, drought, pestilence, and famine illustrate one class of crisis. The incidents of birth, death, adolescence, and marriage, while not unanticipated, are always foci of attention and occasions for control. They throw a strain on the attention, and affect the mental life of the group. Shadows, dreams, epilepsy, intoxication, swooning, sickness, engage the attention and result in various attempts at control. Other crises arise in the conflict of interest between individuals, and between the individual and the group. Theft, assault, sorcery, and all crimes and misdemeanors are occasions for the exercise of attention and control. To say that language, reflection, discussion, logical analysis, abstraction, mechanical invention, magic, religion, and science are developed in the effort of the attention to meet difficult situations through a readjustment of habit, is simply to say that the mind itself is the product of crisis. Crisis also produces the specialized occupations. The

medicine-man, the priest, the law-giver, the judge, the ruler, the physician, the teacher, the artist and other specialists, represent classes of men who have or profess special skill in dealing with crises. Among the professions whose connection with crisis is least obvious are perhaps those of teacher and artist. But the teacher is especially concerned with anticipating that most critical of periods in the life of the youth when he is to enter manhood and be no longer supported by others; and art always arises as the memory of crisis.

Of course a crisis may be so serious as to kill the organism or destroy the group, or it may result in failure or deterioration. But crisis, as I am employing the term, is not to be regarded as habitually violent. It is simply a disturbance of habit, and it may be no more than an incident, a stimulation, a suggestion. It is here that imitation plays a great rôle. But it is quïte certain that the degree of progress of a people has a certain relation to the nature of the disturbances encountered, and that the most progressive have had a more vicissitudinous life. Our proverb "Necessity is the mother of invention" is the formulation in folk-thought of this principle of social change.

The run of crises encountered by different individuals and races is not of course, uniform, and herein we have a partial explanation of the different rate and direction of progress in different peoples. But more important than this in any explanation of the advanced and backward races is the fact that the same crisis will not produce the same effect uniformly. And in this connection I will briefly indicate the relation of attention and crisis to (1) the presence of extraordinary

individuals in the group, (2) the level of culture of the group, and (3) the character of the ideas by which the group-mind is prepossessed:

1. Whatever importance we may attach to group-mind and mass-suggestion, the power of the attention to meet a crisis is primarily an individual matter, or at least the initiative lies with the individual. The group, therefore, which possesses men of extraordinary mental ability is at an advantage. The fleeing animal, for instance, is always a problem, and the resilience of wood is probably always observed, but the individual is not always present to relate the two facts, and invent the bow and arrow. If he is present he probably, as Lewis Morgan suggests, raises his group to a higher level of culture by producing a new food epoch. The relation of the "great man" to crisis is indeed one of the most important points in the problem of progress. Such men as Moses, Mohammed, Confucius, Christ, have stamped the whole character of a civilization. The pride with which the German people refer to themselves as the "Volk der Dichter und Denker," and their extraordinary policy with respect to specialization, which has made the German university a model for other nations, are attributed largely to Fichte and his associates who, after the disastrous battle of Jena, preached a policy of scholarship as over against a policy of war. Similar cases of the reconstruction of the habits of a whole people by the dominating attention of a great man are found among the lower races. Dingiswayo and Chaka converted pastoral Zululand into a military encampment, as a result of witnessing he maneuvers of a regiment of European soldiers in Cape Colony. And Howitt's *Native Tribes of South*

East Australia has interesting details on the influence of extraordinary men in a low race.

2. The level of culture of the group limits the power of the mind to meet crisis and readjust. If the amount of general knowledge is small and the material resources scanty, the mind may find no way out of an emergency which under different conditions would be only the occasion for further progress. If we could imagine a group without language, numbers, iron, fire, and without the milk, meat, and labor of domestic animals, and if this group were small, as it would necessarily be under those conditions, we should have also to imagine a very low state of mind in general in the group. In the absence of mathematics, fire, and iron, for example, the use of electricity as a force would be out of the question. The individual mind cannot rise much above the level of the group-mind, and the group-mind will be simple if the outside environmental conditions and the antecedent racial experiences are simple. On this account it is just to attribute important movements and inventions to individuals only in a qualified sense. The extraordinary individual works on the material and psychic fund already present, and if the situation is not ripe neither is he ripe. From this standpoint we can understand why it is almost never possible to attribute any great modern invention to any single person. When the state of science and the social need reach a certain point a number of persons are likely to solve the same problem.

3. The character of the accommodations already made affects the character of the accommodation to the new crisis. When our habits are settled and running smoothly they much resemble the instincts of animals.

And the great part of our life is lived in the region of habit. The habits, like the instincts, are safe and serviceable. They have been tried, and they are associated with a feeling of security. There consequently grows up in the folk-mind a determined resistance to change. And there is a degree of sense in this, for while change implies possibilities of improvement it also implies danger of disaster, or a worse condition. It must also be acknowledged that a state of rapid and constant change implies loss of settled habits and disorganization. As a result, all societies view change with suspicion, and the attempt to revise certain habits is even viewed as immorality. Now it is possible under these conditions for a society to become stationary, or to attempt to remain so. The effort of the attention is to preserve the present status rather than to reaccommodate. This condition is particularly marked among the savages. In the absence of science and a proper estimation of the value of change, they rely on ritual and magic, and a minute, conscientious, unquestioning and absolute adhesion to the past. Change is consequently introduced with a maximum of resistance. Some African tribes, for example, have such faith in fetish that they cannot be induced to practice with firearms. If, they say, the magic works, the bullet will go straight; otherwise it will not. Similarly, oriental pride in permanence is quite as real as occidental pride in progress, and the fatalistic view of the Mohammedan world, the view that results are predetermined by Allah and not by man, is unfavorable to change. Indeed, the only world in which change is at a premium and is systematically sought is the modern scientific world. It is plain therefore that the nature

of the reaction of attention to crisis is conditioned by the ideas which prepossess the mind.

It is, of course, possible to overwork any standpoint, but on the whole I think that the best course the student can follow is to keep *crisis* constantly in mind—the nature of the crisis, the degree of mental and cultural preparation a people has already attained as fitting it to handle the crisis, and the various and often contradictory types of reaccommodation effected through the attention. In this way he will be able to note the transition of blood-feud into law, of magic into science, of constraint into liberty, and, in general, the increasing determination of conduct in the region of the reason and the cerebral cortex instead of the region of habit and the spinal cord.

III

Finally, I wish to warn the student to be suspicious of what may be called the particularistic explanation of social change. Some years ago, when it was the habit to explain everything in terms of "the survival of the fittest," an ingenious German scholar put forth the theory that the thick crania of the Australians were due to the fact that the men treated the women with such violence as to break all the thin heads, thus leaving only thick-headed women to reproduce. A still more ingenious German offered as an explanation of the origin of the practice of circumcision the desire of certain tribes to assure themselves that there should be no fraud in the collection of trophies in battle. This was assured by first circumcising all the males of one's own tribe. Under these circumstances certitude was secured that any foreskins brought in after battle with

uncircumcised enemies could not have been secured from the slain of one's own party. Lippert, the great culture-historian, has argued that the presence or absence of the milk of domestic animals has sealed the fate of the different races, pointing out that no race without milk has ever risen to a high level of culture. He is also responsible for the suggestion that man took the idea of a mill for grinding, with its upper and nether mill-stones, from the upper and lower molars in his own mouth. Pitt-Rivers says that the idea of a large boat might have been suggested in time of floods, when houses floated down the rivers before the eyes of men. I think that even the eminent ethnologists Mason and McGee err in this respect when they suggest the one that "the hawks taught men to catch fish, the spiders and caterpillars to spin, the hornet to make paper, and the cray-fish to work in clay" (see *infra,* p. 35), and the other that plants and animals were first domesticated in the desert rather than in humid areas, because in unwatered regions plants, animals, and men were more in need of one another and showed a greater tolerance and helpfulness (see *infra,* pp. 66, 73). In fact a variorum edition of the theories of the origins of culture would be as interesting as Mr. Furness' variorum edition of *Hamlet,* which, while it was not, I believe, prepared with that in view, is yet one of our great storehouses of amusement.

Some of these theories are simply imaginative and absurd, and others are illustrations of the too particularistic. Doubtless milk is a very precious possession, but so also is iron. No race ever attained a considerable level of culture in the absence of iron. And it

would be possible to name a number of things which races of high culture possess and races of low culture do not possess. The idea of crushing, pounding, and rubbing is much too general to warrant us in saying that the idea of the mill is derived from the human mouth. When man has once a floating log, bark boat, or raft, he can enlarge it without assistance from floating houses. The growth of plant life and the idea of particular attention to it are too general to depend on any particular kind of accident, or on a desert environment. Animals follow the camp for food, they are caught alive in traps, and the young ones are kept as pets; and this would happen if there were no desert regions. Two of Herbert Spencer's great and gross errors of this character—the derivation of all the learned and artistic occupations (even that of the dancer) from the medicine-man, and the assumption that ghost-worship is the origin of all spirit belief and worship (even of the worship of animals and plants) I have considered in Parts II and VI of this volume.

The error of the particularistic method lies in overlooking the fact that the mind employs the principle of abstraction—sees general principles behind details —and that the precise detail with which the process of abstraction begins cannot in all cases be posited or determined. Thus the use of poison was certainly suggested to man by the occurrence of poison in nature, and in some crisis it occurred to man to use poison for the purpose of killing. And since the snake is the most conspicuous user of poison in nature it has usually been said that man gets his idea from the snake, and that the poisoned arrow-point is copied from the tooth of

the poisonous snake. I have no doubt that this thing frequently happened in this way, but there are also various other poisons in nature. The deadly curare with which the Guiana Indian tips his tiny arrow is a vegetable product. The Bushmen use animal, vegetable, and mineral poisons, and a mixture of all of them, and the Hottentots manufacture poisons from the entrails of certain insects and from putrifying flesh. In short, assuming poison in nature and the arrow in the hands of man, we can assume the development of a poisoned arrow-point even if there had been no such thing as an envenomed serpent's tooth.

Neither can we look too curiously into the order of emergence of inventions nor assume a straight and uniform line of development among all the races. There have been serious attempts to determine what was the first weapon used by man. Was it a round stone, a sharp-pointed stone, a sharp-edged stone, or a stick? But all we can really assume is prehensility and the general idea. The first weapon used was the object at hand when the idea occurred to man. Or, having any one of these objects in his hand, it used itself, so to speak, and the accident was afterward imitated.

The attempt to classify culture by epochs is similarly doomed to failure when made too absolutely. The frugivorous, the hunting, the pastoral, and the agricultural are the stages usually assumed. But the Indian was a hunter while his squaw was an agriculturist. The African is pastoral, agricultural, or hunting indifferently, without regard to his cultural status. And the ancient Mexicans were agricultural but had never had a pastoral period. Different groups take steps in culture in a different order, and the order

depends on the general environmental situation, the nature of the crises arising, and the operation of the attention. This is a sufficient comment on the theory, sometimes used in pedagogy, that the mind of the child passes through epochs corresponding to epochs of culture in the race. We have every reason to think that the mind of the savage and the mind of the civilized are fundamentally alike. There are, indeed, organic changes in the brain of the growing child, but these are the same in the children of all races. The savage is not a modern child, but one whose consciousness is not influenced by the copies set in civilization. And the white child is not a savage, but one whose mind is not yet fully dominated by the white type of culture. And, incidentally there was never a more inept comparison than that of the child with the savage, for the savage is a person of definitely fixed and specialized aims and habits, while the child, as Professor Dewey has expressed it, is "primarily one whose calling is growth," and who is consequently characterized by flexible and unspecialized habits. To be sure there is a certain rough parallelism between the mental development of the child and the course of civilization. The race began with motor activities and simple habits and civilization has worked itself onto a complex and artificial basis, with special emphasis on the reflective activities. The child also begins with hand and eye movements and is gradually and systematically prepared by society to operate in the more complex and reflective adult world. But that is all. In both child and race the motor activities precede the reflective, and this could not be otherwise, for consciousness is largely built up through the hand and eye movements.

PART I

THE RELATION OF SOCIETY TO GEOGRAPHIC AND ECONOMIC ENVIRONMENT

THE RELATION OF SOCIETY TO GEOGRAPHIC AND ECONOMIC ENVIRONMENT

TECHNOGEOGRAPHY, OR THE RELATION OF THE EARTH TO THE INDUSTRIES OF MANKIND

By technogeography is meant the study of the relationship between the earth and human arts and inventions.

Anthropogeography is the consideration of the earth in its broad connections with the whole science of man, including his body and his mind, his arts, languages, social structures, philosophies and religions. Of this broader subject there are many subdivisions; but at this time your attention will be directed to the activities of men as effected and affected by the earth, to which study the term technogeography is applied. The arts of mankind have changed the face of nature, and some charming books have been written upon the subject of the earth as modified by human action.

But now we are to trace out a few of the great industries of our race as they were provoked and developed by their terrestrial environment; in short, human actions as they were shaped and modified by the earth.

In this inquiry the earth as modifying human life includes the land surface down to the bottom of the deepest possible mine or artesian well or geological stratum; all the aqueous mass—that is, every drop of water in the seas and out of them, for there is no telling when any drop may enter the circle of human agencies and ownerships; the circumambient air, every gallon of that aërial ocean which swathes the world and vitalizes all living things, the common carrier of clouds and birds, of health and disease, of music and perfumes, of industry and commerce. As modifying human conduct, as subject of preëmption and monopoly, not only the masses just mentioned are included, but motions and powers, even gravity, mechanical properties, physical forces, chemical activities, vital phenomena of plants and animals, that may be covered by patents and their uses become a matter of legislation and diplomacy. . . . .

The industries here discussed are chiefly the commonest trades and daily occupations of men, in which material substances and terrestrial forces are involved. However, as Mr. Spencer and other writers on dynamic anthropology well observe, even the most intellectual and spiritual activities of men have their operative side, their apparatus and sensible processes. The earth not only modifies the trades and crafts, but all human activities, however evoked.

1. In the first place, I ask you to remember that every action in every industry, in every climate, and every status of culture involves five substantial elements:

a. Raw materials in endless varieties and attributes.

b. Motive power of man, beast, fire, air, water, gas, hard substances, chemistry, electricity.

c. Tools and machinery, including both their manual or operative and their working parts and the mechanical powers involved.

d. Processes simple, complex, and compound—that is, single motion for single function, many movements for simple function, many motions for many functions.

e. Products ready to supply desires or give satisfaction or to enter as material into new series of changes.

The progress of mankind means the greater and greater elaboration of these—more uses or functions for the same species of material furnished by the earth, more species of the earth's materials for each function or piece of work; more uses for each form of power, and more forms of power involved in the same use; more parts to the handle and working portion of the same tool, and more tools for the same operation; more movements or forms of motion in the same process and a greater variety of processes to compass the very same result; more elements or products of industry to gratify a single desire, and the creation of new and more exacting desires by the refinement of society.

2. I beg you to hold in mind, secondly, the fact that all voluntary human actions are carried on to satisfy wants or needs, bodily, mental, spiritual, social, beginning with the lowest animal cravings and ending with the highest aspirations of the most exalted men; also you must remember that these needs have

been developed and organized by a larger and larger acquaintance with the earth and its resources.

The order of arising of these wants, both in the child and in the race, have been for food, rest, shelter, clothing, defense. The the order of intellectual wants was in the same lines. Each craving has grown from simplicity and monotony to variety and complexity, involving more activities in the same process, more and more varied mental processes in the same activity, ending with coöperative thinking of higher and higher order.

3. Remember, thirdly, that these industries for gratifying desires may be grouped into the following classes as regards the earth, together constituting a cycle and each involving the five elements before named:

a. Going to the earth for raw materials—fishing, hunting, gleaning, lumbering, mining. Some of these may be enlarged by cultivation and domestication in order to stimulate the generosity of the earth.

b. Carrying, hauling, transporting, in any stage of manipulation, using the powers furnished by nature.

c. Manufacturing, changing the physical, chemical, or vital form, or the size or shape, or combinations of materials for some useful end.

d. Exchange, barter, buying, selling, with all the handling that is involved. In this there is a rude mimicry of the correlation and conservation of energy.

e. Consumption, the storing and using up of the finished product, either to wear it out or to make it the raw material of another cycle of activities of the same kind. In brief, the sum of human industries is the arts of exploitation, cultivation, manufacture, transportation, commerce—extremely simple in primitive life, infinitely complicated and interlocked in civilization. The industries of men, from this point of view, are the transformation of terrestrial materials, by means of terrestrial forces, according to processes of which the earth set the earliest examples, and all this to gratify human desires. . . . .

The earth is the mother of all mankind. Out of her came they. Her traits, attributes, characteristics they have so thoroughly inherited and imbibed that, from any doctrinal point

of view regarding the origin of the species, the earth may be said to have been created for men and men to have been created out of the earth. By her nurture and tuition they grow up and flourish, and folded in her bosom they sleep the sleep of death.

The idea of the earth-mother is in every cosmogony. Nothing is more beautiful in the range of mythology than the conception of Demeter with Persephone, impersonating the maternal earth, rejoicing in the perpetual return of her daughter in spring, and mourning over her departure in winter to Hades.

. The human race is put into relation with all bodies through gravitation, with all mineral, vegetable, and animal substances through the laws of physics and chemistry; with the vegetal and the animal kingdom through the additional phenomena called life, and with all animals through mentation. . . . .

The earth is also a great warehouse of materials of infinite qualifications for gratifying human desires.

This is apparent enough to any one who reflects about it, but few persons think of the long ages during which these substances were being compounded and compacted. These materials are the foundation of all technique and all styles of technique—textile, plastic, graphic, glyphic, tonic, and landscape. For them the earth not only furnishes the raw stuffs, but the apparatus and different motives to different races.

We should not overlook the fact, however, that the greatest care of time has been bestowed on the thin pellicle of the earth called the soil, from which come our food, and that of our domestic animals, our clothing, our habitations, our vegetal and animal supplies, and even the sustenance of the marine products upon which we prey. I have not time in this place to speak of the labor bestowed by nature upon what Professor McGee calls "the veneer of brown loam," out of which the most of human activity has sprung.

Before quitting the subject of the study of the earth as a warehouse the student ought not to overlook the varied characteristics of these resources. The qualities of things are the earth's, the grains and colors of the same stone, the elasticity and fibres of timber, the plasticity and temper of clays, the malleability and ductility of the same metals, and so on. So marked are these

that in our higher civilizations we must have iron from half a dozen countries to conduct one of our complex establishments. The very diversity of the same material from place to place has resulted in the production of the greatest possible variety of skill.

How quickly the lower races of men recognized these qualities and put them to use, not only discovering that stone is flaky and bois d'arc elastic, for instance, but that there are certain conditions under which these qualities exist more favorably than in others. . . . .

The earth is also the reservoir of all locomotion and power useful to man. Even the strength of his own limbs and back is derived from the food which she bestows. I do not speak of that, however, but of the substitutes therefor. She gives to the North American Indians the dog, to the South American the llama, to the people of the eastern continent the horse, ass, camel, elephant, and ox to convey them about and to carry or draw their loads.

The winds blow upon the sails and turn the mills, the waters set in motion the wheels and transport the freight. The steam is a still more versatile genius of power, and electricity just enters upon its mission. Coal, as a cheap source of energy, enables men to substitute for areas of raw material areas of manufacture and, indeed, to create areas of consumption.

The several kingdoms and forces of nature give rise to their several bodies of arts, each of which springs from the earth, and their investigation may be named as follows:

1. Physiotechny, of arts dependent on the physical forces of the earth.
2. Pyrotechny, of arts of creating and utilizing fire.
3. Anemotechny, of arts based on uses of the atmosphere.
4. Hydrotechny, of arts based on the uses of water.
5. Lithotechny, of arts based on the uses of minerals and rocks
6. Phytotechny, of arts based on the uses of plants.
7. Zootechny, of arts based on uses of animals.

It would occupy too much space were I to elaborate in the most elementary manner the methods in which domestic animals, wind, fire, water, elasticity of solids, elasticity of gases, explo-

53300

sives, chemical action, magnetism and electricity had enrolled themselves in the service of mankind merely to furnish power to do the work that in the simplest form is done by hand. Every one of them must have struck terror into the hearts of the first men. By being subdued they obeyed the principle that I have previously laid down of increasing their own usefulness and indispensableness by creating and complicating new wants.

The form of the globe, its coast lines, elevations and reliefs, the amount of sunshine, the properties and contents of the atmosphere, the varying temperatures, winds, rainfalls, and springs beneath the surface, the waterfalls in the surface also act as motives, if not as motive power to all apparatus and all the movements of men. We cannot eliminate the heavenly bodies from this enumeration, since they furnished clocks and almanacs and compasses to primitive peoples, and longer voyages were undertaken by their guidance in the Pacific than were made two centuries later in the Atlantic by Columbus with the aid of the mariner's compass. . . . .

Exploitation and cultivation, manufacture, transportation, exchange, consumption, as I have previously said, together constitute the round through which commodities are conducted in the progress of industries. The proposition is that the earth was in the beginning and is now the teacher of these activities. There were quarriers, miners, lumberers, gleaners, and, some say, planters; there were fishermen, fowlers, trappers, and hunters before there was a *genus homo*. There were also manufacturers in clay, in textiles, and in animal substances before there were potters, weavers, and furriers; there were all sorts of moving material and carrying passengers and engineering of the simplest sort. It might be presumption to hint that there existed a sort of barter, but the exchange of care and food for the honeyed secretions of the body going on between the ants and the aphidæ look very much like it.

The world is so full of technological processes brought about among her lower kingdoms that I should weary you in enumerating them. Stone-breaking, flaking, chipping, boring, and abrading have been going on always, by sand-blast, by water, by fire, by frost, by gravitation. Archæologists tell us that sav-

ages are very shrewd in selecting bowlders and other pieces of stone that have been blocked out and nearly finished by nature for their axes, hammers, and other tools.

In tropical regions of both hemispheres where scanty clothing is needed certain species of trees weave their inner bark into an excellent cloth, the climax of which is the celebrated tapa of Polynesia. Furthermore, the fruits of vines and trees offer their hard outer shells for vessels and for other domestic purposes, for adornment of the persons, and as motives in art and handicraft.

Among the animals there is scarcely one that has not obtruded itself into the imaginations of men and stimulated the inventive faculty. The bears were the first cave-dwellers; the beavers are old-time lumberers; the foxes excavated earth before there were men; the squirrels hid away food for the future, and so did many birds, and the last named were also excellent architects and nest-builders; the hawks taught men to catch fish; the spiders and caterpillars to spin; the hornet to make paper, and the crayfish to work in clay.

2. The very genius of transportation and commerce also is taking commodities from places where they are superabundant and from ownerships where there is an excess over needs and placing them where they are wanted. It is a change of place to relieve excess and to supply demands. The savages had their changes of place and of ownership, constituting a primitive or elementary commerce, having all the characteristics of the modern; but I am now speaking of something that preceded even this. Nature had her great centers of superabounding material and took pains to convert this excess into supply against scarcity. She had devised her balance-wheels to effect uniformity of life and to preserve it against famine and failure. In illustration of this let me point out two or three examples:

a. She stored up the excess of one season to supply the scarcity of another season of the year. Many examples of this could be cited. All over the earth bees gather honey from ephemeral plants that man cannot eat and store it away in enduring form to be used by man in time of need. In certain regions of California the piñon seeds grew so abundantly that the Indians could not gather them; but the squirrels did lay them up in vast

quantities, fed on them in winter, and themselves were eaten by the savages at a time when meat diet was most necessary, and gave to the Indians a lesson in economy and storage.

b. She used the excess of one locality to supply the dearth of another locality. In some places along the great lakes the wild rice (*Zizania aquatica*) covers thousands of acres and feeds millions of water fowl. These same creatures are the source of food for the Eskimo, who never saw a spear of grass nor ate a mouthful of vegetal diet. They are also wonderful teachers of the art of migration. Seeds of plants entered into this natural transportation through rivers and ocean currents, through winds and by the agency of birds, even of migratory birds, and set up in their progeny new centers of supply on distant shores.

c. But the most marvelous of all these commercial enterprises of nature is that in which she converts apparently inaccessible and unutilizable material into inexhaustible supplies for every industry of man. A wonderful example of this is found in the littoral feeding grounds. There is a bench of land under the sea skirting every shore and reaching under all estuaries. It is not deep. Indeed, it is the connecting link between the land and the profound sea. Upon this plateau the débris of the fertile lands and fresh waters are daily poured and myriads of the lower plants and animals are developed. Here are nourished cod, shad, herring, salmon, oysters, clams, and so on. The fish, after attaining maturity, actually swim up to men's doors to be captured; also upon this feeding ground are nourished the sea mammals, which have been indispensable to the life and happiness of our northern aborigines. It is true that every useful plant is converted by nature out of material which men cannot use. Long before Texas cattle were bred in one place and driven hundreds of miles to market, nature reared fish and walrus upon her enormous pasture-lands under the sea and drove them to market herself.

3. From one point of view the languages and literatures of men have been taught and suggested by the earth. Many words in all languages are imitations of the cries and sounds of nature. The motions and actions of her creations and creatures give rise to names for our common activities. By figures of speech the

conduct of these beings furnishes the literary man and the moralist with means of graphic and pleasing description.

Furthermore, every act is an expression of thought, and everything made by men is a testimony to the intellectual life of the man who made it. Even our most poetic and spirituelle conceptions find their counterparts in phenomena around us.

4. The earth has furnished man with examples of many forms of social life, from the absolute promiscuity of gregarious creatures to the monogamy for life among the eagles. The problems of society, clanship, government, and politics were working themselves out under the eyes of primitive man.

5. In the forms of its creeds and its cults, humanity does not seem to be able to get away from earthly patterns. The Elysian fields, the Valhalla, the life that now is, reflected upon the life beyond, are all shaped after models familiar upon the earth. Likewise the cults of men, involving places of worship, social organization, times of meeting, festivals, and the like, necessarily depend upon climate and environment generally. There is a true sense in which religion is physiographic and in its lower forms entirely naturistic. . . . .

Besides this general view of the earth as an organized series of materials and forces, it is necessary also to study it in parts, to anatomize it, as the zoölogists would say. The most cursory glance reveals the fact that there are certain well established worlds within this world. This earth, which seems to be an oblate spheroid, all parts of which are approachable from the rest and their functions almost interchangeable one with another, is made up of great isolated parts or patches, which may be denominated culture or inventional areas, *Oikoumenai* of Aristotle. Each one of the areas has a climate of its own, waters and lands of its own, plants and minerals and animals; indeed, a physiography of its own; so that when a group of human beings have, in the fortunes of existence, found themselves in one of these spaces they have been irresistibly developed into a culture and trades and industries of their own. This was the centrifugal stage of the evolution of industries. It was just as though they had cut themselves off from the rest of their species and gone to inhabit another world.

The forces acting to create these culture areas were, first of all, earth forces, the same that were at work to build the earth. After the general plan of the entire structure was laid down, the fitting and furnishing of the various apartments was a matter of local appropriation of these forces. Solar heat, moisture, terrestrial forms and movements horizontally and vertically coöperated in each area to stamp upon it the type of its life. The result in each instance was to create a series of conditions suitable for some lives and not for others, suitable for man in one stage of his culture journey and not in others. In regard to the capability of meeting man's necessities, the regions of which we are speaking may be thus characterized:

1. Areas of discouragement, too cold, too hot, too wet, too dry, too elevated, malarious, infested with noxious insects or beasts, too thickly forested. By and by these very regions might become centers of greatest activity.

2. Areas of monotony. Upon this point Schrader uses the following comparison:

"Life commenced in the water, where the changes of light, heat, pressure, food, and occupation were very slight, attained its complete development on the land, in an element more delicate and more mobile, in the midst of reactions more multiple and more varied."

This same rule applies to the lands themselves. Those in which men occupied a homogeneous environment were like the sea, and the people were little differentiated. The arctic regions in their marine mammals and semi-aquatic men furnish a good example of this class.

But in the equatorial regions of the globe there occurs much of the monotony of environment which characterizes the circumpolar region. In the latter man exhausts himself in his efforts for subsistence; in the former he does not develop because nature supplies his few wants and at the same time overwhelms the work of his hands; but in Australia all the unfavorable conditions of human existence are exaggerated. Isolation, aridity, want of indentations and relief, absence of useful plants or animals; these negative conditions are certainly, of all in the world, least favorable to man.

Schrader follows the plan of establishing anthropological zones, but tidewater, Piedmont, and mountain areas are also important.

3. Areas of two elements, two elevations, two seasons, two occupations, two wants. This will be exemplified further on.

4. Areas of many elements, with variety of climate, scenery, sources of material supply, and means of communication, stimulating the appropriation of nature's largess.

As regards the creation of races of men, these regions were ethnic areas. Respecting arts and industries, they certainly were technic areas, and therefore they were most important elements in the present study.

In the most primitive life exploiting, transportation, manufacture, barter, and consumption in each culture area extended over little space, used only a few materials, changed their form only a little, were in the hands of a few persons, and their products were consumed on the spot. A Zuñi woman walks five miles to the mesa for clay, carries it home on her back, makes it into pottery, decorates and burns it, and then wears it out in cooking, water-carrying, or storing food. She is at once miner, common carrier, potter, artist, cook, and purveyor. Her culture area does not embrace more than 100 square miles.

Even now many of these separate culture areas, in spite of the mixing of people in the historic past, may still be traced. From the North American continent the savage has been nearly moved, but scholarship is able to lay down the home sites of all the historic families; the habitations of their various stocks are marked out geographically.

On the extreme northern limit of America there is a fringe of icy coast. You may commence to trace it in the northeastern corner of Greenland. The whole shore of this land mass forms a part of that area, down to Cape Farewell and up to Smith's sound. Resuming your journey about the southern limit of Labrador, you are to explore Baffin land, all about Hudson bay, among the islands of northern Canada, past the mouth of Mackenzie river all the way to Bering strait. The arctic shores of both continents above and below these straits as far west as Lapland, in Norway, must be included, and the Alaskan coast as far

down as Mount St. Elias. This is the Arctic, the interhemispheric world. . . . .

Immediately in contact with this hyperborean oikoumene is the birch-bark region, extending in both hemispheres. The house, the boat, the snowshoe frame, the vessels for food and water and for cookery, the lumber for all arts, and the food for much of the game are hence derived. It is the birch-bark country in space, just as we speak of the stone age, the bronze age, the steel age, in time. In early culture they did not ship birch wood and bark, but birch art sprung from birch environment. Geography was the mother of the arts. . . . .

The land-locked inlets of America's northwest coast, extending for more than a thousand miles, being a safe and easy mode of communication between Thlingit, Haida, Tsimshian, Nutkans, and Coast Salish tribes, not only was there much borrowing of myth and speech and commingling of blood, but arts were interchanged and an incipient commerce engendered.

The great interior basin of the United States is arid, but abounds in excellent seed-producing plants, and here the people were bread-eaters and all the term implies. The plains of the great West were the abode of innumerable buffalo, and there the tribes, regardless of ethnic differences, were tall meat-eaters, dwelling in hide teepees, clothing themselves in skins, and practicing a hundred arts with reference to this one animal. On the east coast of North America were the clam, oyster, turtle, abundance of mackerel, shad, and herring, plentiful supply of wild fowl and mammals and fertile lowlands and diversities of wood for their implements. These varied conditions produced on the whole the finest Indians north of Mexico. The same careful scrutiny of the Mexican plateau, the Orinoco, or the Amazon drainage, of the three culture elevations of Peru, of the river systems of Africa, of the island groups of the Indo-Pacific, would, if we had time to go over them, show us that the common trades and daily toil of the people run in grooves like a train of cars. Each people had ransacked its own environment and got the best out of it that their grade of culture was capable of extracting.

It is not necessary to continue the enumeration of these technic areas of the earth. It may be truly said that each distinct

zoölogical or botanical region was capable of developing a distinct body of arts. And, per contra, if there be found a people in possession of industries that are unique, then the region must be ransacked for the environment and resources that endowed and patronized these industries. The art and the craft are of the region. No people are to be held responsible for the development of any of nature's gifts if nature has never bestowed them.

In America, when it was discovered, the technic regions were not equally advanced in the culture of their inhabitants. In the valley of Mexico and in Central America and on the Pacific coast of the Andes were the highest arts. The western continent, as a whole, was not the best fitted by nature for man's advancement. The mammals would none of them yield their milk and there were no draught or pack animals except the dog in the north and the llamas in the south. All the arts of the new world were the works of men's hands; consequently the whole area of culture skill was little elevated compared with that of the eastern continents. But the Mexican and the Peruvian body of industries occupied the most artificial centers. . . . .

No sooner had the varied riches of different areas begun to manifest themselves to one another than human feet took up the march which has given the whole earth to the whole species, and promises to make of it, by and by, a single neighborhood. In short, the earth developed in isolated peoples a separate set of industries. With your permission I shall call it the centrifugal or outward movement.

Next, it brought these separate cultures together as a higher composite organization of industry, and tends at last to make all men dependent upon the entire earth. This you will let me call the centripetal movement.

The centrifugal movements were the actions of savages and barbarous peoples. The centripetal movements were toward civilization. The movements toward widening the oikoumenai were:

1. Intra-areal, or inside the geographic province to enlarge it
2. Inter-areal, between small contiguous provinces.
3. Inter-regional, overstepping great natural barriers.
4. The march of aggressive campaigns.

5. Inter-continental, the beginnings of universal conquest.
6. Inter-hemispheric, the periods of great discoveries.
7. Universal.

The primitive occupation of different culture areas on the earth prepared the way for the diversification of the ways and means of gratifying human desires. This centrifugal man developed the culture areas and their arts. The more advanced centripetal man brought the arts together and thus provided for their universal distribution, elaboration, and perfection.

Barter and long journeys for subsistence, cultivation of plants and domestication of animals, the use of machinery, and the storage of food were not unknown to pre-Columbian Americans. In one grave near Chillicothe, Ohio, were found copper from northern Michigan, obsidian from Yellowstone park, mica from North Carolina, pyrula shells from the Gulf of Mexico.

Ivory hunting and other natural causes set the African negroes on the move before the days of recorded history, so that there is no longer a negro race. Their original neighborhood is not known; their languages are better means of classification than themselves; their arts are hopelessly mixed.

In studying the migrations which might have led Mongoloid peoples to America, the escape from the regions of an ever-vanishing food supply in the rear and the pursuit of an inviting food supply in front played a prominent part. Two hundred years ago and more the upper Pacific, the Bering sea, and the plains of the great West contained far the largest storages of human subsistence in the world. The fish, the seacow, the Arctic mammals, the caribou, the buffalo, in a certain sense, peopled America.

In the Indian ocean and the Pacific, six hundred years ago, the Polynesian race suddenly became the Norsemen of that area. In their improved canoes, with sails and outriggers, they set out from Tonga and visited Easter islands, on the east; Madagascar, on the west; New Zealand, on the south, and Hawaii, on the north, each journey being not far from two thousand miles from home. No other motive was assigned but to follow the leadings of nature to behold and enjoy more of the earth.

In this same Malayo-Polynesian area, especially in the region

extending from Australia to Indo-China, there is a curious mixing of the regional question with that of race. Here dwell Negroes, Malays, Polynesians, and Australians; but the material out of which things are made, the implements with which they are made, and the products of industrial arts are clearly of the soil, and there is great confusion of industry and race, undergoing the process of transformation from segregation to unification.

Racial peculiarities overlap the natural elements of industry and the technogeographer and the ethnogeographer are merged into the ethnotechnologist.

The Mediterranean sea remained a barrier until many diverse civilizations were developed on its African, Asiatic, and European shores. It was at first a means of dividing peoples of the same race until they had elaborated their several contributions to industrial processes.

The second stage of industrial development had begun when the first column of Aryan history began to be written.

Of early Caucasian and Mongolian culture only a few hints can be given. In prehistoric times precisely the same law was in force which the American continent revealed to the eyes of the discoverers; but another state of things was in operation there in historic times, namely, the working out of the higher law of commerce and artificiality of life, in the operation of which the genius of man rises superior to natural barriers and exigencies and turns whole continents or the whole earth into one organized cultural area or *oikoumene.*

No one can tell the region that gave to man the cereals of Europe. It is said that rice is a contribution from southeastern Asia, but whence wheat, rye, barley, millet, oats? Fruits, like apples, plums, quinces, peaches, belong to the same category. The date may be accredited to Africa and the grape to many lands. But there is no account of our race at a time when the genius of invention was being developed through them in their separate *oikoumenai.* The historian was too late on the field to record the gathering of them in a wild state.

Likewise the domestic animals. The dog offered his services as a hunter and a beast of burden, the cat as the enemy of vermin; the cow, horse, ass, elephant, sheep, goat, camel, llama were

furnished by nature to enhance the arts of food, shelter, clothing, manufacture, transportation, and to set an example of industry; but of the transition there is no record. The second stage of industrial development had begun when the second volume of Aryan history was about to be written. . . . .

In primitive life culture areas were chiefly the regions where abounded the raw materials. They were in fact areas of natural exigencies. But in higher civilization the arts have usurped the prerogative of nature and created artificial culture areas. Plants have been made to grow and animals to thrive thousands of miles from their original home. Materials of all sorts are carried to manufacturing centers to be made up into forms for commerce and consumption. These are artificial technic areas, whose geography is an essential study in political economy.

For example, the Muskoki Indian woman used to go to the fields, gather the wild hemp, carry it home, soak it, hackle it, spin it, weave it, and then use it up on the spot. But on that very ground now grows the cotton, a foreign plant, raised by one man, ginned by another, hauled on wagons to railroads, thence carried to the sea and across it to great manufacturing towns, where it is hauled and spun and woven, and hauled and shipped and sold and sold until the product may be seen in every portion of the habitable globe. The geography of this one staple in its multiform transformations, brought about by the gradual appropriation of all the forces of the earth and then its movements until at last it has been caught in the current of every terrestrial wind and followed every world-encompassing oceanic stream, would exemplify what I am trying to say about the coming of the globe to be one united *oikoumene*.

In all this, the race has grown, not independent of the earth, but more dependent upon it. Artificial and domesticated supplies of material are as much from the earth as the wildest. Men in devising tools and machinery and engines to do the work of their hands have had to go to their mother for them. They use other forces than their own, but they are still forces furnished by the earth. They have multiplied invention upon invention, but every one of them is a device for using a great loan already in hand for the purpose of raising a larger one. . . . .

In this partnership between man and the earth the progress of culture has beeen from naturalism to artificialism; from exploitation to cultivation and domestication; from mere muscular power to more subtle physical force of man, of beast, of water, of air, of fire, of electricity; from tools to machinery, from simplest imitative processes to highly complex processes, involving many materials and motive powers and inventions; from short journeys to long journeys; from mere barter to world-embracing commerce; from monotonous and monorganic food and clothing, shelter and furniture, mental and social appliances to forms as complex and varied as the imagination can conceive. And when the supply gives out, it is not the earth that fails, but it is the comprehension and the skill of men. . . . .—O. T. Mason, *American Anthropologist*, 7:137–58.

SITUATION AND NUMBERS OF THE HUMAN RACE

. . . . The organisation of races outside of the European and Asiatic sphere of civilization does not permit any density of population to exist. Small communities cultivating their narrow patches of ground are separated from each other by wide empty spaces which either serve for hunting-grounds or lie useless and vacant. These limit the possibilities of intercourse, and render large permanent assemblies of men impossible. Hunting races, among whom agriculture does not exist or tends to vanish, often dwell so thinly scattered that there will be only one man, frequently less, to 24 square miles. Where there is some agriculture, as among many Indian tribes, among Dyaks, in Papua, we find from 10 to 40 in the same area; as it develops further, in central Africa for instance, or the Malay Archipelago, from 100 to 300. In the northwest of America the fishing-races who live on the coast run to 100 in 20 square miles, and the cattle-keeping nomads to about the same. Where fishing and agriculture are combined, as in Oceania, we find as many as 500. The same figure is reached in the steppes of Western Asia by the partly settled, partly nomad population. Here we cross the threshold of another form of civilization. Where trade and industry combine to operate there is sustenance for 10,000 persons (as in India and East Asia), or 15,000 (as in Europe) to 24 square miles. . . . .

In density of population lies not only steadiness of and security for vigorous growth, but also the immediate means of promoting civilization. The closer men are in contact, the more they can impart to each other, the less does what is acquired by civilization go to waste, the higher does competition raise the activity of all their powers. The increase and maintenance of the numbers are intimately connected with the development of culture; a population thinly scattered over a large district means low civilization, while in old or new centres of civilization we find the people in dense masses. China and India reckon their inhabitants at 600,000,000, but an equivalent area of the intervening region of the Central Asiatic nomads, Mongolia, Tibet, East Turkestan, cannot show a sixtieth of the number. Six-sevenths of the earth's inhabitants belong to civilized countries.

While the history of the European nations for centuries past shows the same decided tendency to increase which we observe even in ancient times, the uncivilized races offer examples of shrinkage and retrogression such as we find in the case of the others, if at all, only lasting over a short period, and then as the result of casualties such as war and pestilence. The very thinness of the population is a cause of their decay; their smaller numbers are more readily brought to the point of dwindling or vanishing. Rapid using-up of the vital powers is a characteristic of all the races in the lower stages of civilization. Their economical basis is narrow and incomplete, frugality only too often verges on poverty, scarcity is a frequent visitor, and all those measures of precaution with which sanitary science surrounds our life are lacking. In the struggle with the too powerful forces of nature, as in the Arctic regions or the steppe-districts of the southern hemisphere, on the confines of the inhabited world, they often succumb till they are completely wiped out, and a whole race perishes. It is quite a mistake to refer, as is often done, the extinction of barbarous races, of which we hear so much, solely to contact with superior civilization. But closer consideration enables us to recognise self-destruction as a no less frequent case. The two work as a rule together; neither would attain its end so quickly without the co-operation of the other. The basis of a healthy increase in population is an approximate balance of the

sexes; this among uncivilized people is generally disturbed, and the number of children small. War, murder, and kidnapping all contribute to reduce the population. Human life is of small value, as human sacrifices and cannibalism sufficiently indicate. Lastly, man in a state of nature is far from possessing that ideal health of which so many have fabled; the negroes of Africa can alone be described as a robust race. Australians, Polynesians, Americans, on the other hand, are far more subject to diseases than civilized men are, and adapt themselves to new climates with difficulty. There is no question but that these peoples were in many districts slowly dying out by sickness before the appearance of Europeans. But no doubt the arrival of civilization disturbs society down to its roots. It contracts the available space, thus altering one of the conditions upon which, as we shall hereafter see, the peculiar social and political arrangements of races in a natural state were framed. It introduces wants and enjoyments which are not in harmony with the mode of living usual among these people, or their capacity for labour. It brings upon them diseases previously unknown, which on a new soil commit frightful ravages; and inevitable quarrels and fighting besides. Over the larger territories, such as North America, Australia, New Zealand, the progress of civilization led to the crowding of the aboriginal races into the least favourable districts, and therewith to the diminution of their numbers.—F. RATZEL, *History of Mankind*, 1:10–12. (Trans. of *Völkerkunde*.) The Macmillan Co., 1896.

THE OPERATION OF GEOGRAPHIC FACTORS IN HISTORY

. . . . Man can no more be scientifically studied apart from the ground which he tills, or the lands over which he travels, or the seas over which he trades, than polar bear or desert cactus can be understood apart from its habitat. Man's relations to this environment are infinitely more numerous and complex than those of the most highly organized plant or animal. So complex are they that they constitute a legitimate and necessary object of special study. The investigation which they receive in anthropology, ethnology, sociology, and history is piecemeal and partial, limited as to the race, cultural development, epoch, country or

variety of geographic conditions taken into account. Hence all these sciences, together with history, so far as history undertakes to explain the causes of events, fail to reach a satisfactory solution of their problems largely because the geographic factor which enters into them all has not been thoroughly analyzed. Man has been so noisy about the way he has "conquered Nature," and Nature has been so silent in her persistent influence over man, that the geographic factor in the equation of human development has been overlooked.

In every problem of history there are two main factors, variously stated as heredity and environment, man and his geographic conditions, the internal forces of race and the external forces of habitat. Now the geographic element in the long history of human development has been operating strongly and operating persistently. Herein lies its importance. It is a stable force. It never sleeps. This natural environment, this physical basis of history, is for all intents and purposes immutable in comparison with the other factor in the problem—shifting, plastic, progressive, retrogressive man.

History tends to repeat itself largely owing to this steady, unchanging geographic element. If the ancient Roman consul in far-away Britain often assumed an independence of action and initiative unknown to the provincial governors of Gaul, and if centuries later Roman Catholicism in England maintained a similar independence toward the Holy See, both facts have their cause in the remoteness of Britain from the center of political or ecclesiastical power in Rome. If the independence of the Roman consul in Britain was duplicated later by the attitude of the Thirteen Colonies toward England, and again within the young republic by the headstrong self-reliance, impatient of government authority, which characterized the early trans-Allegheny commonwealths in their aggressive Indian policy, and led them to make war and conclude treaties for the cession of land like sovereign states; and if this attitude of independence in the over-mountain men reappeared in a spirit of political defection looking toward secession from the Union and a new combination with their British neighbor on the Great Lakes or the Spanish beyond the Mississippi, these are all the identical effects of geographical

remoteness made yet more remote by barriers of mountain and sea. This is the long reach which weakens the arm of authority, no matter what the race or country or epoch. . . . .

As the surface of the earth presents obstacles, so it offers channels for the easy movement of humanity, grooves whose direction determines the destination of unknowing, unplanned migrations, and whose termini become, therefore, regions of historical importance. Along these nature-made highways history repeats itself. The maritime plain of Palestine has been an established route of commerce and war from the time of Sennacherib to Napoleon. The Danube valley has admitted to central Europe a long list of barbarian invaders, covering the period from Attila the Hun to the Turkish besiegers of Vienna in 1683. The history of the Danube valley has been one of warring throngs, of shifting political frontiers, and unassimilated races; but as the river is a great natural highway, every neighboring state wants to front upon it and strives to secure it as a boundary.

The movements of peoples constantly recur to these old grooves. The unmarked path of the voyageur's canoe, bringing out pelts from Lake Superior to the fur market at Montreal, is followed today by whaleback steamers with their cargoes of Manitoba wheat. Today the Mohawk depression through the northern Appalachians diverts some of Canada's trade from the Great Lakes to the Hudson, just as in the seventeenth century it enabled the Dutch at New Amsterdam and later the English at Albany to tap the fur trade of Canada's frozen forests. Formerly a line of stream and portage, it carries now the Erie Canal and New York Central Railroad. Similarly the narrow level belt of land extending from the mouth of the Hudson to the eastern elbow of the lower Delaware, defining the outer margin of the rough hill country of northern New Jersey and the inner margin of the smooth coastal plain, has been from savage days such a natural thoroughfare. Here ran the trail of the Lenni-Lenapi Indians; a little later the old Dutch road, between New Amsterdam and the Delaware trading-posts; yet later the King's Highway from New York to Philadelphia. In 1838 it became the route of the Delaware and Raritan Canal, and more recently of

the Pennsylvania Railroad between New York and Philadelphia. . . . . Thus natural conditions fix the channels in which the stream of humanity most easily moves, determine within certain limits the direction of its flow, the velocity and volume of its current. Every new flood tends to fit itself approximately into the old banks, seeks first these lines of least resistance, and only when it finds them blocked or pre-empted does it turn to more difficult paths. . . . .

The great belt of deserts and steppes extending across the Old World gives us a vast territory of rare historical uniformity. From time immemorial they have borne and bred tribes of wandering herdsmen; they have sent out the invading hordes who, in successive waves of conquest, have overwhelmed the neighboring river lowlands of Eurasia and Africa. They have given birth in turn to Scythians, Indo-Aryans, Avars, Huns, Saracens, Tartars and Turks, as to the Tuareg tribes of the Sahara, the Sudanese and Bantu folk of the African grasslands. But whether these various peoples have been Negroes, Hamites, Semites, Indo-Europeans, or Mongolians, they have always been pastoral nomads. The description given by Herodotus of the ancient Scythians is applicable in its main features to the Kirghis and Kalmuk who inhabit the Caspian plains today. The environment of this dry grassland operates now to produce the same mode of life and social organization as it did 2,400 years ago; stamps the cavalry tribes of Cossacks as it did the mounted Huns; energizes its sons by its dry bracing air, toughens them by its harsh conditions of life, organizes them into a mobilized army, always moving with its pastoral commissariat. Then when population presses too hard upon the meager sources of subsistence, when a summer drought burns the pastures and dries up the water-holes, it sends them forth on a mission of conquest, to seek abundance in the better watered lands of their agricultural neighbors. Again and again the productive valleys of the Hoangho, Indus, Ganges, Tigris and Euphrates, Nile, Volga, Dnieper, and Danube have been brought into subjection by the imperious nomads of arid Asia, just as the "hoe-people" of the Niger and upper Nile have so often been conquered by the herdsmen of the African grasslands. Thus, regardless of race

or epoch—Hyksos or Kaffir—history tends to repeat itself in these rainless tracts, and involves the better watered districts along their borders when the vast tribal movements extend into these peripheral lands. . . . .

Owing to the evolution of geographic relations, the physical environment favorable to one stage of development may be adverse to another, and *vice versa*. For instance, a small, isolated, and protected habitat, like that of Egypt, Phœnicia, Crete, and Greece, encourages the birth and precocious growth of civilization; but later it may cramp progress, and lend the stamp of arrested development to a people who were once the model for all their little world. Open and wind-swept Russia, lacking these small warm nurseries where Nature could cuddle her children, has bred upon its boundless plains a massive, untutored, homogeneous folk, fed upon the crumbs of culture that have fallen from the richer tables of Europe. But that item of area is a variable quantity in the equation. It changes its character at a higher state of cultural development. Consequently, when the Muscovite people, instructed by the example of western Europe, shall have grown up intellectually, economically, and politically to their big territory, its area will become a great national asset. Russia will come into its own, heir to a long-withheld inheritance. Many of its previous geographic disadvantages will vanish, like the diseases of childhood, while its massive size will dwarf many previous advantages of its European neighbors. . . . .

Let us consider the interplay of the forces of land and sea apparent in every country with a maritime location. In some cases a small, infertile, niggardly country conspires with a beckoning sea to drive its sons out upon the deep; in others a wide territory with a generous soil keeps its well-fed children at home and silences the call of the sea. In ancient Phœnicia and Greece, in Norway, Finland, New England, in savage Chile and Tierra del Fuego, and the Indian coast district of British Columbia, and southern Alaska, a long, broken shoreline, numerous harbors, outlying islands, abundant timber for the construction of ships, difficult communication by land, all tempted the inhabitants to a sea-faring life. While the sea drew, the land drove in the same

direction. There a hilly or mountainous interior putting obstacles in the way of landward expansion, sterile slopes, a paucity of level, arable land, an excessive or deficient rainfall withholding from agriculture the rewards of tillage—some or all of these factors combined to compel the inhabitants to seek on the sea the livelihood denied by the land. Here both forces worked in the same direction.

In England conditions were much the same, and from the sixteenth century produced there a predominant maritime development which was due not solely to a long indented coast-line and an exceptional location for participating in European and American trade. Its limited island area, its large extent of rugged hills and chalky soil fit only for pasturage, and the lack of a really generous natural endowment made it slow to answer the demands of a growing population, till the industrial development of the nineteenth century exploited its mineral wealth. So the English turned to the sea—to fish, to trade, to colonize. Holland's conditions made for the same development. She united advantages of coast-line and position with a small infertile territory, consisting chiefly of water-soaked grazing lands. When at the zenith of her maritime development, a native authority estimated that the soil of Holland could not support more than one-eighth of her inhabitants. The meager products of the land had to be eked out by the harvest of the sea. Fish assumed an important place in the diet of the Dutch, and when a process of curing it was discovered, laid the foundation of Holland's export trade. A geographical location central to the Baltic and North Sea countries, and accessible to France and Portugal, combined with a position at the mouth of the great German rivers made it absorb the carrying trade of northern Europe. Land and sea co-operated in its maritime development.

Often the forces of land and sea are directly opposed. If a country's geographic conditions are favorable to agriculture and offer room for growth of population, the land forces prevail, because man is primarily a terrestrial animal. Such a country illustrates what Chisholm, with Attic nicety of speech, calls "the influence of bread-power on history," as opposed to Mahan's sea-power. France, like England, had a long coast-line, abundant

harbors, and an excellent location for maritime supremacy and colonial expansion; but her larger area and greater amount of fertile soil put off the hour of a redundant population such as England suffered from, even in Henry VIII's time. Moreover, in consequence of steady continental expansion from the twelfth to the eighteenth century and a political unification which made its area more effective for the support of the people, the French of Richelieu's time, except those from certain districts, took to the sea, not by natural impulse as did the English and Dutch, but rather under the spur of government initiative. They therefore achieved far less in maritime trade and colonization. In ancient Palestine, a long stretch of coast, poorly equipped with harbors, but accessible to the rich Mediterranean trade, failed to offset the attractions of the gardens and orchards of the Jordan valley and the pastures of the Judean hills, or to overcome the land-born predilections and aptitudes of the desert-bred Jews. Similarly, the river-fringed peninsulas of Virginia and Maryland, opening wide their doors to the incoming sea, were powerless, nevertheless, to draw the settlers away from the riotous productiveness of the wide tidewater plains. Here again the geographic force of the land outweighed that of the sea and became the dominant factor in directing the activities of the inhabitants.

Heinrich von Treitschke, in his recent *Politik*, imitates the direct inference of Buckle when he ascribes the absence of artistic and poetic development in Switzerland and the Alpine lands to the overwhelming aspect of nature there, its majestic sublimity which paralyzes the mind. He reinforces his position by the fact that, by contrast, the lower mountains and hill country of Swabia, Franconia, and Thuringia, where nature is gentler, stimulating, appealing, and not overpowering, have produced many poets and artists. The facts are incontestable. They appear in France in the geographical distribution of the awards made by the Paris *Salon* of 1896. Judging by these awards the rough highlands of Savoy, Alpine Provence, the massive eastern Pyrennees, and the Auvergne plateau, together with the barren peninsula, Brittany, are singularly lacking in artistic instinct, while art flourishes in all the river lowlands of France. More-

over, French men of letters by the distribution of their birthplaces, are essentially products of fluvial valleys, and plains, rarely of upland and mountain.

This contrast has been ascribed to a fundamental ethnic distinction between the Teutonic population of the lowlands and the Alpine or Celtic stock which survives in the protected isolation of highland and peninsula, thus making talent an attribute of race. But the Po valley of northern Italy, whose population contains a strong infusion of this supposedly stultifying Alpine blood, and the neighboring lowlands and hill country of Tuscany show an enormous preponderance of intellectual and artistic power over the highlands of the peninsula. Hence the same contrast appears among different races under like geographic conditions. Moreover, in France, other social phenomena, such as suicide, divorce, decreasing birth-rate, and radicalism in politics, show this same startling parallelism of geographic distribution; and these cannot be attributed to the stimulating or depressing effect of natural scenery on the human mind.

Mountain regions discourage the budding of genius because they are areas of isolation, confinement, remote from the great currents of men and ideas that move along the river valleys. They are regions of much labor and little leisure, of poverty today and anxiety for the morrow, of toil-cramped hands and toil-dulled brains. In the fertile alluvial plains are wealth, leisure, contact with many minds, large urban centers where commodities and ideas are exchanged. The two contrasted environments produce directly certain economic and social results, which in turn become the causes of secondary intellectual and artistic effects. The low mountains of central Germany which von Treitschke cites as homes of poets and artists, owing to abundant and varied mineral wealth, are the seats of active industries and dense populations, while their low reliefs present no serious obstacle to the numerous highways across them. They, therefore, afford all conditions for culture. . . . .—Ellen Churchill Semple, *The Influence of Geographic Environment: On the Basis of Ratzel's System of Anthropo-geography.* Chap. i. Houghton, Mifflin & Co. [In press.]

[INFLUENCE OF A DESERT ENVIRONMENT]

I

Great interest attaches to the Papago Indians as the inhabitants of a desert; yet the extent of the interest can be appreciated only when the exceeding rigor of their environment, as manifested by the flora of the district, is understood. Even if the Papago were not interrelated with the flora, as will appear later, it would be desirable to consider their relations to an environment which transforms the stabler organisms of the earth.

. . . .

Although the animals and plants of Papagueria display pronounced individuality, and although some of their most prominent features are adaptive devices for securing independence, a striking peculiarity of the region is the coöperation among living things. Along the lines of groundwater the species are measurably or wholly antagonistic to their neighbors of distinct species; but over the arid uplands and in the broad waterless valleys all plants coöperate, not only with plants of distinct species but with animals, for the maintenance of common existence. Sometimes the coöperation involves little modification and no loss of individuality on the part of the agents; this type may be called *communal:* in other cases the coöperation is so intimate that animals and plants are not only mutually helpful but so closely interdependent that neither could exist without the aid of the other; this type may be called *commensal.*

Communality.—A mesquite springs up on the plain; within two or three years the birds resting in its branches drop the seeds of cacti, some of which, like vines, are unable to stand alone; and the cactus and the mesquite combine their armature of thorns for mutual protection. Then wind-blown grass seeds lodge about the roots, and grasses grow and seed beneath the sheltering branches; and next small mammals seek the same protection and dig their holes among the roots, giving channels for the water of the ensuing rain and fertilizing the spot with rejectamenta. Meantime the annual and semi-annual plants which maintain a precarious existence in the desert take root in the sheltered and fertilized soil beneath the growing cactus and

mesquite, and in season it becomes a miniature garden of foliage and bloomage. Then certain ants come for the seeds, certain flies and wasps for the nectar, and certain birds to nest in the branches. In this way a community is developed in which each participant retains individuality, yet in which each contributes to the general welfare. So advantageous is the communal arrangement that few organisms of the dryer portions of Papagueria pursue independent careers; the vast plains are dotted with communities or colonies from a few rods to some furlongs apart, while the intermediate stretches are practically lifeless; and the very soil is molded into a succession of hillocks with bare glades between, which persist even after the extermination of the colonies through climatal change or through human intervention. Thus do a large part of the plants and animals of the desert dwell together in harmony and mutual helpfulness; for their energies are directed not so much against one another as against the rigorous environmental conditions growing out of dearth of water.

This communality does not involve loss of individuality, which prevails throughout Papagueria—indeed the plants and animals are characterized by an individuality greater than that displayed in regions in which perpetuity of the species depends less closely on the persistence of individuals. By reason of this individuality there is a certain enmity between the animal and vegetal colonists. The small birds devour the seeds of the cactus and the squirrels nibble the beans of the mesquite, yet not all of the seeds are eaten, else a succeeding generation of birds and squirrels would starve; the spiders suck the blood of the flies and the wasps paralyze the spiders to serve as food for their young, yet not all of the flies and spiders are slain, else their enemies would famish; the hawks and eagles rend the small birds and squirrels, yet not all of the peaceful creatures are rent, else the birds of prey would perish; deer and antelope and, since the coming of white men, burros and kine crop the grass and browse on the tender twigs, yet not all the grass and young shoots are consumed, else the herbivores would suffer and die. In some respects the enmity of the colonists is more bitter than that of antagonistic species in humid lands; yet it is adjusted

and developed into a marvelous solidarity under which the sum of possible vitality is increased apparently to a maximum; singly or collectively the colonies support more plants than they would be able to support without the aid of their animal associates in the distribution of germs and in fertilization; they support more insects than could live with a sparser flora; they support more herbivores than could be kept on a flora not fertilized by insects; collectively the colonies support a carnivorous fauna which could not exist if either the herbivorous things or the plants on which they live were destroyed. If the vitality of the desert were limited to any one type the sum would be reduced nearly or quite to nothingness, for few of the plants and none of the animals are independent of their communal associates. The solidarity of life in the desert is far-reaching and rises above the antagonism of individuals and species, for its strength is directed against the hard inorganic environment.

Commensality.—Over the great alluvial aprons and in other tracts of firm but not too stony soil the fields of the farmer ant abound. Where the soil is particularly suitable the farms adjoin and cover most or all of the surface over scores of square miles. Each farm includes a clean and well-kept threshing-floor and drying-ground 5 to 30 feet across, with the passageway to the subterranean habitation in the center, and an annulus 3 to 20 feet wide of luxuriant grass, on whose seeds the ants subsist. Across these annuli run great turnpikes often a foot wide, connecting farm with farm, sometimes for furlongs. In such a farming district there is practically no vegetation except the cultivated grass; not only are other grasses and weeds kept down, but even the relatively mighty cactus, greasewood, and mesquite are apparently exterminated—certainly the prevailing plants of the region are absent from the most extensive and best cultivated farming districts. Thus the tiny formic farmers have developed an art of agriculture, have made conquest of the land for their needs, and have artificialized a plant apparently as completely as man has artificialized corn and rice; and in the process they have increased and multiplied to such an extent that they would die of famine in millions if their crop should fail, while it seems almost certain that their crop-plant would quickly die

out if the cultivation and perhaps fertilization by the animals were withdrawn. Thus the rigorous environment of the desert has developed one of the most remarkable intelligences of the world, and has rendered two widely different organisms interdependent.

To the traveler the saguaro is, partly by reason of its loftiness, the most prominent element in the flora. Now the young stem of this cactus shoots with considerable rapidity as a rather slender column, at first without flower or fruit. After a period said to range from 5 to 10 years, and after a height varying from about 5 to 15 or more feet has been attained, the plant begins to bear and the rate of upward growth diminishes. Thereafter it slowly thickens and still more slowly increases in height; and in time branches start out at right angles to the trunk and soon turn upward to form a giant candelabrum. Now it is noteworthy that the height at which the saguaro begins to flower and fruit varies from district to district with the height of the local flora; in a district of greasewood and scrubby chaparral the flowering may begin at a height of only 5 to 8 feet, while in a district of vigorous mesquite the flowering may not begin until the stem is 10 feet higher. It is noteworthy also that in the typical districts the branches, if not more than 3 to 5 in number, usually spring from just below the height at which flowering began (the supernumerary branches spring either sporadically or above the ordinary level of the tops of the first crop), and that the branches always grow more slowly than the youthful trunk, perhaps no more rapidly than the well-grown trunk from which they spring. Thus the saguaro would appear to be in some way correlated with the surrounding vegetation, and while the correlation might be ascribed to soil differences it seems probable that the connection is more complex. On examining a large number of examples in many districts the impression is produced that the mindless aim of the saguaro, through the survival of the fittest, is first to rise above its neighbors as rapidly as possible before expending energy in reproduction; that it then rests from the activity of stem-growth and divides its energy between gradual expansion and strengthening of the trunk on the one hand and reproduction on the other, yet continues slowly pushing upward

until it dominates the landscape; and that when the main stem becomes extravagantly high the branches consume most of the energy of growth. A reason for this erratic behavior is found when it is observed that the flowers are fertilized by insects and that the seeds are distributed by birds; for it is manifest that the finding of the plants by flying things is facilitated by their great stature. Moreover the flowers are brilliantly white in color and attractive in perfume, while the fruit is gorgeously red and sweetly sapid. Still further it is manifest that the typical placing of branches is the most economical possible at once for the pumping of water from below and for bringing the flowers and fruits at the extremities within easy sight of the coöperating insects and birds. So it would appear that the saguaro is a monstrosity in fact as well as in appearance—a product of miscegenation between plant and animal, probably depending for its form and life-history, if not for its very existence, on its commensals. Whether the small black insects that suck the flowers and distribute pollen are wholly dependent on the saguaro for existence, like the yucca moth on the yucca (as shown by the lamented Riley), is questionable; and it is hardly probable that the birds that consume the saguaro fruit are so dependent on it as to have undergone actual differentiation of characters fitting them to the commensality.

The lesson of coöperation among subhuman organisms in Papagueria is the solidarity of life to the extent that the vital energies of plants and animals are directed primarily against the inorganic environment, rather than against kindred and alien organisms, while one of the results of this solidarity is the development of strong individuality. By reason of this coöperation the desert was in part reclaimed and a series of superorganic organizations—unconscious and undesigned but none the less beneficial—was developed before the advent of man. In general, social and other institutions are a product of human intelligence alone; and it is of interest to the anthropologist to learn of the growth of organizations among lower organisms, and of special interest to study the effect on mankind of an environment so peculiar as to produce subhuman communality.

Characteristics of human life.—The Papago Indians are *the* desert people of North America. They dwell among the cacti, paloverdes, mesquites, and barren plains of a region in which human enemies cannot survive. They are semi-nomadic in habit; they migrate northward in spring, southward in autumn, with tolerable regularity, and remove their rancherias with the starting and failing of springs and with other changes in water supply. In the wanderings of generations they have acquainted themselves with meteorologic conditions and with every constant and inconstant source of water; thereby they have acquired an advantage over the invader, who is soon fain to retire or famish.

One of the first characteristics of the Papago to strike the observer is his capacity for abstinence: The Papago vaquero will ride one, two, or even three days without drinking, under a sun so fierce and in an air so dry that the tenderfoot dies of thirst in a few hours; and a family of a dozen often confine themselves for weeks to the contents of a single olla daily for drinking, cooking, and all other purposes. So, too, they live on reduced rations of solid food for considerable periods without inconvenience; indeed their habitual diet is moderate; even allowing for the condensed and nutritious character of some of their foods. When the interpreter was asked how the people of a rancheria were able to subsist for a winter on a certain limited supply of food, he replied, "They eat only twice a day, and if there is not enough they eat only once." The abstinence from solid food is in a measure apparent only, for the Indians are disposed to gluttonize in idleness when opportunity arises, when their capacity for consuming is no less striking than their power of abstaining. This characteristic of the tribe is possessed by other primitive peoples, perhaps in nearly equal degree; yet it is noteworthy as displayed among these Indians.

Another characteristic of the Papago is strength and fleetness: A withered crone (shown in the photographs of the expedition), weighing apparently not more than 80 or 90 pounds, arose from the ground with a kiho containing a stone mortar 196 pounds in weight, carried this burden more than half a mile over a sandy road, and then let it down from her back, and this without perceptible exhaustion or attracting particular attention

among her neighbors. Many equally noteworthy feats of strength and endurance might be enumerated. Fleetness is displayed in the tribal game of kashâneku, or football, in which it is not unusual for contestants to run, kicking the ball before them, 30 or 40 miles in an afternoon. It should be observed that fleetness has apparently declined among the Papago since the introduction of the horse; yet they and other desert tribes have always been noted as runners: Bartlett found the Opata couriers to run 40 or 50 leagues (105 to 131 miles) in 24 hours, and Lumholz mentions that a Tarahumari Indian has been known to carry a letter nearly 800 miles in 5 days (these tribes belong to the same family as the Papago), while the Seri, who have never acquired the horse, are noted as *the* runners, par excellence, of this region of runners. Thus, although perhaps not especially distinguished, the Papago Indians are noted for strength, celerity, and endurance.

A third characteristic is apparent longevity. In every rancheria wrinkled and gray grandames and grandsires are found, generally in considerable numbers, and usually engaged in arduous labors; it is the aged woman who bears the heaviest burden, and her consort who performs the hardest field task, for the family. It is impossible to obtain exact figures concerning the age of the old people, but the proportion of the active aged is manifestly much larger than among civilized peoples. In this respect, too, the Papago is more or less like neighboring tribes, all of whom claim patriarchs and matriarchs who have far outlived the normal span of life.

Combining these and other characteristics of the desert tribe, it appears that they are in harmony with the characteristics of the animals and plants; yet they are not so well developed as to clearly distinguish the Papago from other tribes, especially from those of other portions of the arid regions. When the physiologic or biotic characteristics of plants, animals, and men are compared it appears that the plants are most and mankind least modified in the direction of fitness to environment, the subhuman animal occupying an intermediate position.

Turning to the institutional or social aspect of the tribe, certain fairly distinctive characteristics are found, yet they are

measurably masked by reason of the transition from the primitive state to the accultural condition initiated with the introduction of European crop-plants and stock. Fortunately there is a sufficient vestige of primitive culture to indicate many of the primitive customs. The Papago combined the chase for animal quarry with the search for vegetal foods; he gathered the fruits of various cacti and mesquite beans in season; he collected indurated pericarps and berries for beads; in his southward migrations he obtained seeds of corn and pumpkin as well as native beans—indeed it is probable that the primary purpose of the migration was the collection of seeds,—and on his return in the rainy season these were planted about the water holes and arroyo deltas, and in time the crop was gathered. There are indications that a tribal organization grew out of these customs; but this question need not now be pursued. It suffices to note that, as a consumer of seeds and fruits and as a distributer of seeds, the Papago entered into the vital solidarity of the desert and contributed toward the perpetuation of species that were good in his sight. In this way he made partial conquest of the soil and the productions thereof for his own behoof, and still further increased the sum of desert life; yet his conquest of the land at the time of the coming of the Spaniard was far from complete, apparently less complete than the conquest made by the farmer ant; and the historical Papago has never controlled the scant waters of his domain, but sought them where they chanced to occur in the hazard of storm and sun, just as he chased game and hunted wild fruits.

For three and a half centuries the Papago has been in contact with an alien culture, and there is evidence that during a preceding century or more he suffered through the repeated invasion of his borders by his hereditary enemy, the Apache; thus the indigenous Papago culture can hardly be considered as independently autochthonous or indigenous—the process of culture development was undoubtedly effected by external influence. Fortunately the prehistoric remains of Papagueria throw light on an antecedent culture which appears to have been essentially indigenous; and there is reason for opining that the prehistoric

peoples were the direct ancestors of the Papago and certain other southwestern tribes.

The prehistoric remains comprise greatly reduced ruins of villages and irrigation works, as well as "las trincheras" (or intrenched mountains), with included or associated pottery of fine texture and finish, and highly polished stone implements; these relics being abundant and distributed over a considerable part of Papagueria. Now, on comparing the ruins with modern artificial works (including those of the sedentary Mexicans who have pushed far into the arid district) certain important differences are found: In the first place the ancient villages were much larger than the modern rancherias of the Papago; in the second place the ruins are much more numerous than the Papago rancherias and Mexican settlements combined; again the ancient irrigation works (of which the Papago have none) are much more extensive than the modern acequias, dams, and reservoirs of the Mexicans; and finally the trincheras are unique. The great extent of the prehistoric irrigation works is especially impressive; the ancient acequia in Arivaca valley was raised above the floodplain and 150 feet in width, the confining banks being occupied by nearly continuous rows of habitations, while the modern acequia, put in through American enterprise, is a simple ditch 8 to 10 feet wide; and a single one of the many prehistoric villages in the valley comprised 130 habitations, or fully twice as many as those of the modern American, Mexican, and Indian inhabitants. It may be noted also that a village in this valley and one or two others elsewhere have remains of what appear to be corrals containing tanques for water, indicating the domesticating of a rather small animal (perhaps the vicuña). Viewed collectively, the prehistoric remains indicate an ancient population much more extensive than that of the present; for the great number of the villages may not be ascribed to successive occupation, since the irrigation ditches are so large and carried so far up the valley sides as to be adequate for the supply of a large contemporaneous population and at the same time to be inconceivably extravagant if only a small population were to be supplied at a given time. It is of course possible that the prehistoric precipitation was greater than that of the historical period, but there is no special warrant for

this supposition, which is moreover inherently improbable and also unnecessary. It may be observed summarily that the archeologic and ethnologic data in the region indicate a numerous and peaceful agricultural population at a period probably between two and five centuries before the Spanish invasion, and suggest (1) that this population began to suffer from forays by a predatory enemy dwelling in the high Sierra, (2) that the system of forays gradually grew into warfare for vengeance and reprisal, (3) that the peaceful folk found a temporary refuge in the trincheras, and (4) that the irrigation works were finally destroyed, whereby the valley tribe was all but annihilated and driven partly into the remoter desert fastnesses, partly into the more northerly valleys tributary to the Colorado—the desert remnant being the immediate ancestors of the Papago. It is not necessary to dwell on the details of this succession or even to affirm its verity beyond the trustworthiness of a good working hypothesis; the essential point, which seems to be indisputable, is that the district supported a numerous agricultural or largely agricultural population, who were able to maintain themselves, despite the prevailing aridity, by means of an elaborate system of irrigation. This population and culture seem to have been essentially indigenous, and, up to the time of decadence, not greatly influenced by external conditions. Accordingly, during the prehistoric period represented by the ruins, the indigenes of Papagueria made conquest, not only of the soil as do the modern Papago, but of the waters; and thereby their culture rose to a higher plane, yet a plane which may justly be regarded as normal to the desert.

The lesson of human life in the desert is found in the cooperation between men, animals, and plants in such wise that the sum of vitality is multiplied and at the same time subordinated to intelligence: Man consumes fruits and seeds, yet distributes the germs of plants useful to him; as he advances in culture he conserves the germs unto the season of germination; he either neglects or directly destroys useless and noxious plants; and in all these ways he improves the flora. Man subsists in part on game, yet, under the economy of solidarity, he does not ex-

terminate the game animals and thereby cut off a supply at its source; but rather coöperates with them in a communality analogous to that between the animals and plants; he aids, albeit unconsciously, the herbivores in escaping the carnivores, and for this service they pay tithes in flesh; he even enters into coöperation with carnivores, such as the coyote, which he spares to become his scavengers, and they reciprocate by forming a semi-conscious cordon of protectors about the camp or village; and in these and other ways a partial cultivation of plants and domestication of animals is brought about collectively, and man enters into and dominates the solidarity of desert life. Then if peace persists he begins to transport and preserve water, and this is the germ of irrigation by which the wilderness is made to blossom and by which both plants and animals are multiplied and artificialized.

Interrelations of life.—When the plants, animals, and men of the desert are compared with respect to physiologic or ontogenic characters, it is found that the stationary plants have suffered greatest modification, the environment-driven animals less, and the environment-molding humans least of all; but when they are compared with respect to collective or demotic modification, it becomes manifest that the moveless plants are least, the moving animals more, and previsingmen most profoundly modified.

When the life of the desert is compared with the vital phenomena of humid regions, it is found that under the pressure against an adverse inorganic environment, the beginning of the control of environment springs lower on the stem of phylogenic development—that the desert species, genera, and orders enter into a mutually beneficial coöperation while yet the rain-fed organisms are frittering energy in internecine strife. Thus it would appear that among plants and animals, as among men, hard necessity is the mother of progress. It would also appear that among plants and animals, as among men, strength lies in union; and progress in combination leads to solidarity.

The great lesson of plants, animals, and men in the desert is found in the modification of organisms and the development of organizations: Under the hard environment, organisms cease to strive against one another and each strives against inorganic

nature; under the common pressure they are forced into union, and thus coöperation is initiated. Now there are three stages in coöperation; the first stage is that in which the organisms merely stand together for mutual protection, but retain undiminished individuality—this is communality; the second stage is that in which individualities blend through miscegenation between unlike organisms, as between the yucca and yucca moth—this is commensality; the third stage is that of voluntary inclusion and exclusion of organisms for the common welfare of the solidarity or for the especial weal of the dominant organism, whether ant or man—this is the stage unwittingly, yet not unhappily, called agriculture.

The lesson of life in Papagueria may easily, and within limits safely, be extended to other regions; for the phenomena and relations are more or less closely paralleled elsewhere. It may appear paradoxical to affirm that it is in arid districts, where agriculture is most arduous, that agriculture began; yet the affirmation is not gainsaid but rather supported by history, and is established beyond reasonable doubt by the evidence of the desert organisms and organizations.

So, whatever its last estate, in its beginning agriculture is the art of the desert.—W. J. McGee, "The Beginning of Agriculture," *American Anthropologist*, 8:362–75 [whole paper, 350–75].

II

. . . . Throughout much of Papagueria the people are pastoral and their largest herds are of kine. These are of course domesticated, the descendants of European stock; yet their condition is by no means that of the thoroughly domesticated cow of the dairy farm or cottage, not even that of the animals on the ordinary stock ranch of the western states; they are wild and vicious, fearful of men, especially strangers, absolutely uncontrolled in respect to breeding, and, except for the annual rodeo, often nearly as free from human constraint as the bura deer of the mountain-sides. They are held in contact with man chiefly by the need for water, preferably taken from tinaja or barranca far from human habitation, but from well or tanque

during the drier months. The well may be remote from habitation, save perhaps an adobe house in which two or three vaqueros exist to draw the water (in a rawhide bag by means of a riata laid over a beam and snubbed to the saddle-horn); the tanque may be a dozen or a score of miles from the nearest rancheria. Hither the cattle repair daily or bi-daily, about sunset, in herds of a score or possibly a hundred, each led by a powerful bull continuously bellowing defiance as he approaches. . . . .

On the whole, the kine are sullenly tolerant of mankind through the constraint of thirst and the restraint of defeat in conflict; while the men tolerate and constantly strive to subjugate the unwilling animals only for the sake of food, clothing, and saddlery. The toleration is the unkindest of the desert, and is maintained only because of its mutual beneficence—without the kine the rancheros would be impoverished, and without the artificial wells and tanques most of the cattle would famish. . . . .

There are relations between men and other animals in the deserts of Papagueria, but those of the vulture, the dove, the quail, the coyote, and the cow are representative. In each case there is an intimate association which is commonly more or less antagonistic, yet mutually beneficial. The vulture is a scavenger, the dove is a pet and the quail a gleaner while both are food-sources, the coyote is a tutelar guardian and scavenger, and the cow is a source of wealth. Associations of the sort are not, indeed, confined to Papagueria; visitors to the ancient city of Charleston are familiar with the buzzards roosting on the market-house, petted by the people and protected by ordinance in recompense for their services as public scavengers; on many eastern farmsteads the common quail is a family protégé and wanders at will about fields and granaries; in some cities, like the Moslem capital on the Bosporus, ownerless dogs take the place of Charleston's vultures, and are guarded by popular sentiment and public law, as in the days of Willis' "Pencilings by the Way," when the citizen who slaughtered one of the vicious curs of Constantinople was fined in a quantity of wheat sufficient to bury the beast when suspended by the hind feet with nose touching the ground; yet it is noteworthy that the relations are closer and more numerous in the deserts, where the antagonistic ele-

ments of environment are few and fierce, than beneath softer skies. It is significant, too, that in all of these cases the relations are alike in one respect—they are *essentially collective,* not only on the part of the men, but on the part of the animals; the primary relation is not between individual man and individual animal as in perfect ownership, nor between a single individual of the one and a group of the other as in ordinary domestication, but between a group of the one and a group of the other. . . . .

On considering the several cases of relation between animals and men, they are found to present certain similarities; yet there are differences. The relations of mankind with quail and coyote are wholly collective, and there is no definite ownership (save in the rare cases in which individual animals are restrained); in the case of the vulture the relation is also wholly collective and the ownership shadowy; in the case of the dove the relation is collective and not at all proprietary, save in the pets; while in the case of the cow the relation is collective only in a general way, which is qualified by ownership of the entire herd by the patriarch—yet even this ownership is much less definite than in civilization, *e. g.,* in that it is understood that any hungry traveler is entitled to kill such stock as he may need for his own consumption. Although the cow alone is classed as domestic and was imported into the country for man's behoof, the other animals are hardly less dependent on man for continued existence. If a migration of the nomadic type were made by Mexicans, or more especially by the Papago Indians, the herd would be driven slowly, consuming such pasture as might be found on the way; undoubtedly the vultures and coyotes would follow the clan and herd; a part of the doves would be carried in cages, some others would follow, and those that stupidly remained behind would doubtless die, while the short-sighted quails would probably remain to suffer decreased food-supply and increased predation.

On considering the several aspects of the relation between animals and men, it is found easy to arrange the series in the order of intimacy. In the Mexican villages the order is undoubtedly, first, kine; second, vultures; third, coyotes; fourth, doves, and, finally, quails—*i. e.,* the relation runs down from

domestication to simple association enforced by the hard environment. Among the Indians the order appears to be, first, kine, acquired from the Spaniards; second, coyotes; third, vultures, and, fourth, doves, for, so far as observed, the quail and Indian can hardly be said to be coöperative. Now it is to be remembered that the relations exemplified in these cases are veritable and—save perhaps in the case of Indian and quail—represent mutual adjustment on the part of both the associates; the habits of each copartner would be modified by the removal of the other; and the several associates, with others, combine to form a similarly interdependent assemblage, or a solidarity.

On considering the degree of relation it is found that the clearest line of demarcation is between that of the kine and those of the lowlier animals, and, partly in deference to common usage, the cases may be classified with respect to this line. Under such classification the kine alone represent domestication; the others are essentially alike in that they are characterized by mutual *toleration* between men and the respective animals without definite ownership or purposive control on the part of the former. There is a third class of relations between men and animals, which it is not the purpose here to discuss, represented by previsional breeding, or stirpiculture, or *artificialization*. So the effective relations between animals and men, in which the former always yield eventually to the dominant intellect of the latter, may be called *zooculture*, and may be seriated in three great classes, which also represent stages in development, as follows:

Zooculture { Artificialization
Domestication
Toleration. . . . .

One who observes the several cases of mutual toleration between animals and men in Papagueria can hardly fail to inquire why simple toleration has not passed into complete domestication. The inquiry is not altogether fruitless. It is found that vultures are on such terms of intimacy with the residents of the rancherias that they might, with a little effort, be coaxed into the domicils, and in the course of a few years trained to return to them like domestic poultry; this is not done, as is evident, and

indeed as the rancheros explain, only because they are unclean and foul-smelling birds, attractive enough at a little distance, but repulsive on nearer approach. Among the Indian villages it is found that the coyote is repelled from the firesides and plazas only by the fully domesticated dogs of European descent; and, as the shaman at Poso Verde explained, the coyote is too independent in spirit (*i. e.*, too fractious and petulant in disposition) to associate or compete with the common dog about the household; yet the Indians have traditions of a golden past in which coyotes and men associated freely, and, in view of the domestication of the animal among scores or hundreds of tribes, it is manifest that the tradition contains a grain of truth. Among both Mexicans and Indians it is found that the dove is so familiar with the human folk as to suggest that it might be completely domiciliated, as it is in small part—indeed, when one of an adult pair is caged the mate voluntarily takes up its abode on or alongside the cage, which it leaves only for food or water, or on too close approach of the somewhat-feared human associate; and, so far as can be judged, complete domestication is neglected only because the bird is too small to be valuable as poultry, and too easily taken to demand culture in confinement. It is found, too, that the more wary quail is regarded as too small and trifling for serious attention. So adequate reasons appear for the retention of the several animals in the lower stage of zooculture.

When the inquiry is pushed into the past and extended to other animals it is still found fruitful. Evidently the present reasons for failing to domesticate the coyote did not apply before the importation of the European dog, and it is accordingly easy to understand how he was brought into domestication through the antecedent stage of collective toleration; the conditions being especially favorable when the habitat of the coyote was shared by the wolf which drove the smaller animal to human shelter, where his presence gave notice of the more dangerous enemy, so that the human and bestial copartners were both benefited. It is evident, too, that the present reasons did not apply to the peaceful and toothsome turkey, which must have sought refuge about the prehistoric rancherias just as the dove does now; so it is easy to see how this animal became domesticated so com-

pletely as to be guarded by night in corrals and covered shelters by the ancients of both Sonora and Arizona. It is equally evident that the reasons did not apply to the timid guanaco or vicuña, whose useful pilage, edible flesh, and capacity for burden-bearing must have attracted the cupidity as well as the sympathy of the ancient Mexicans, and led to that domestication which is recorded in prehistoric corrals as well as in petroglyphs and paintings. The modern association is essentially collective, and owes its intimacy to the mutual acquaintance of the animals and men and to the toleration by each of the presence and movements of the other; and the occasional capture and confinement of individuals is a relatively unimportant factor. The character of the prehistoric association is lost in the mists of antiquity, yet it may safely be inferred from that of the present, and the only reasonable inference is that the course of natural development has been uniform, and that the prehistoric association was also collective and arose in mutual toleration; and this inference is checked and verified by the fact that it was those species (and those alone) best adapted to mutual toleration with agricultural man that were brought into domestication on the western hemisphere before the advent of the Caucasian. . . . .

Observation in all lands shows that plants, animals, and men are dependent on their physical environment in varying degrees. The stationary plant lives at the mercy of sun and storm, moisture and soil; the moving animal seeks shelter from cold, heat, and wind, journeys to water, and migrates in search of food; thinking man builds habitations and manufactures clothing for protection against the elements, and stores, manufactures, and transports food and drink. So the living things of the earth may be arranged in an order of emancipation from physical conditions, and this arrangement is found to represent also the order of self-activity or spontaneity—the plant adjusts itself to conditions, the animal seeks or flies conditions, the man modifies conditions. . . . .

Observation shows, in like manner, that plants, animals, and men are mutually helpful in varying degrees: The apathetic plant, in so far as constrained by the cruel law of the survival of the fittest, strives against its alien fellows and even its own

kind for stature, length of life, and abundance of seed; its strength is against its neighbor, and it combines slowly and imperfectly with other organisms of its own grade, preferably of its own species; yet it is ready to profit selfishly by the labors of pollen-bearing bee, seed-distributing bird, or cultivating man. The sentient animal enters, partly by planetary chance and partly through instinct, into combination with its fellows and also with the plants and other animals on which it subsists; if it selfishly destroys the living things forming its own food-supply it pays capital penalty, while if it improves the creatures constituting its provender it reaps due reward; and the species that most effectively contribute toward the improvement and perpetuation of food-yielding organisms survive longest and flourish most exuberantly. Inventive man, realizing at once what the beast learns only through the extinction of numberless species, preserves the stock and next the seed of useful plants, and then learns to sow, harvest, and garner; at the same time he warms toward tolerant animals, and in time protects them from enemies and succors their young; but he wages war on intolerant animals and useless plants, and gradually exterminates their species; and in these and in other ways he exalts his own kind, aids the good among plants and fosters the good among animals, and multiplies both vitality and mentality. So the living things of the earth may be arranged in an order of helpfulness to contemporary organisms, and this arrangement will be found to represent also the order of domination—the plant mechanically antagonizes contemporaries, the animal instinctively encourages certain contemporaries and discourages others, the man recreates and harmonizes the good and destroys the evil among contemporaries. The arrangement serves to contrast egoism and altruism; the selfishness and cruelty of the living world culminate in the lower stages of vitality, while beneficent altruism, at first the offspring of intellect, gradually rises to crown and dominate the parent.

The various observations show that the progress of life on the earth is from relative inaction to external and internal activity, from mindlessness to instinct and intellect, from barren egoism to coöperation and altruistic motive. Various stages in

this comforting and promising course of development are represented by different groups of plants, animals, and men, whether considered severally or collectively; and in all cases the stages are found to reflect physical conditions with considerable fidelity. The cases are too many and too infinitely varied for enumeration; but it may be noted that vitality and mentality are of a higher order on land than in the sea, in the temperate zones than in the tropics, in arid regions than in humid lands; or, in general terms, that the excellence of life culminates where the physical conditions are such as to demand exercise of faculty, whether in the form of self-activity, mentality, or beneficent domination. The general course of life on the earth is in harmony with the portion of the course represented in Papagueria and other deserts where the plants and animals are characterized by a vigorous prepotency—where the genetic tree of organic relation is so successfully forced that the plants display the germ of instinct, the animals the germ of reason, while both are forced into the earlier stages of altruistic organization through the stress of strife against a common enemy; and here it is that the dominant intelligence of man is specially fitted to enter into and control the incipient organization of his subhuman contemporaries. So, while it may not be denied that the stage in collective coöperation among living things represented by the beginning of zooculture might originate in humid areas, it must be considered infinitely more probable that the stage was reached first in the arid lands of the continents.

The lessons of the relations between animals and men in Papagueria are simple and easily read; the first lesson is that the relations are collective; the second lesson is that there is a stage of mutual toleration of presence and movements anterior to domestication proper; the third lesson is that the relations are forced in rate of growth and in intimacy by a rigorous environment.

It has already been shown that agriculture was, in its beginning, an art of the desert; it may now be affirmed that the sister art, zooculture, is also a child of sun and sand.—W. J. McGee, "The Beginning of Zooculture," *American Anthropologist,* 10: 221–30 [whole paper, 215–30].

[SOCIAL LIFE IN AN ARCTIC ENVIRONMENT]

The Yakuts inhabit a territory in North-east Siberia which is roughly 1,300,000 square miles in area, equal to about two-fifths of the area of the United States without Alaska. It all lies north of the parallel of 60 and is colder than any other part of the inhabited globe. The Yakuts number a little over 220,000. . . . .

The economic unit amongst the Yakuts, taking the whole territory into account, consists of four persons—two grown labourers, one youth, and one boy or old man incompetent to do full work. Ten head of cattle are regarded as indispensable for the maintenance of such a group. Above that norm the Yakuts think that comfort begins, and below it, poverty. In those districts where fish can be obtained as an adjunct, those who have ten head of cattle are well off; but where neither hunting nor fishing offers additional resources, fifteen or twenty head of cattle are indispensable to secure the existence of a family. The latter is the case in the north, on account of the duration of the winter and the badness of the meadows. . . . . In the south where tillage is available as an important subsidiary industry to maintain life, and where it is easy to find wages occupations in winter, the limit of independent means of existence falls to one and a half head of cattle per soul. In spite, therefore, of the wide difference between the absolute amounts of wealth indicated by these limits—from six to twenty head of cattle, *i. e.*, from 120 to 400 rubles ($60 to $200) of capital—all the households that are at the limit stand on the verge of distress. The least accident overthrows the security of their existence, and the least subsidiary resource gives them a chance to live and grow. Such households constitute the great mass of the population. In one *Nasleg* taken as a specimen, of 248 households, 101 are at the limit; 10 have no cattle; 74 have one head, or one and a fraction, per soul; 54 have from 3 to 9 head per soul, that is, are well-to-do in different grades; one has 12 and one has 18 head for each soul in the household. The author knows only one man in the whole Yakut territory who has 500 head of cattle. There are but two or three persons in the whole country who have at their disposition

from 100,000 to 200,000 rubles of capital. Such persons have won their wealth by trade, and their capital consists in wares, money, and various credits.

The limit is set to the growth of households which depend on herding alone. In the first place by the small supply of wages-labourers, and secondly by the communal ownership of land. The point is that the family consisting of four or five souls, of whom three are productive labourers, with a subsistence capital of three head of cattle per soul, constitutes an organisation which can maintain itself with hired labour. The best Yakut mower and two female rakers can make in a summer from 1,200 to 1,800 *puds* (22 to 32 tons) of hay, according to the season. This amount is sufficient to carry through the winter from twelve to fifteen head of cattle. Any household in which the above-described organisation is incomplete must hire labourers, or buy hay, or keep its cattle in a half-starved condition. On the other hand, those who have less than one head of cattle per soul must hire themselves out for wages. Under this organisation the most common and striking phenomenon is that the more independent ones get a higher price for their time and their products than those who are in distress.

The rate of wages is almost everywhere nominally the same. The men get from 35 to 40 rubles per annum with board, if they are able-bodied mowers; and women who rake, or tend cows, get from 20 to 24 rubles, with board. The rations are determined by custom; those of the men are better than those of the women. Only a small part of the wages is paid in money; generally the employers give wares, sometimes such as the employé does not need and which he must sell at a loss. It is still more customary to pay with cattle, especially with horses, either slaughtered or living. The employers try to keep the employed in debt to themselves, and to this end even encourage them in vice—for instance in gambling. Often an employer retains a portion of the wages and threatens not to pay it at all if the labourer does not consent to work for him still another year. It is not difficult for rich men to execute such an injustice as this, on account of the power which they possess in all Yakut communities. The scarcity of labourers is the cause of this con-

duct of the employers, but it also causes them, when once they have hired persons to treat them well. In families in moderate circumstances employés are taken in on an equal footing. In the north, even in the richest households, if no strangers are present, the employé sits at table with the family. He takes part in the conversation and in household proceedings. His intercourse with the members of the family is simple and free from constraint. The Yakuts are generally polite in their intercourse and do not like haughtiness. Employés expect the customary courtesy.

The favourite form of labour contract, from the side of the labourers, is piece-work with payment in advance, although the rate of discount for this advance is very excessive. They think it a disgrace to lend money on interest. Probably these prejudices are due to ancient customs touching economic relations, such as lending out cattle to be fattened upon a contract, or lending out milch cows and mares for a milk return.

The Yakuts dislike to hire themselves out for wages. They return to independence if the least possibility offers. For those who are poor the struggle for independence is so hard that it is useless to talk about their laziness or lack of forethought. If they have less than one and a half head of cattle per soul, they suffer from hunger nearly all their lives. When dying of hunger, they refrain from slaughtering an animal, from fear of losing their independence. The author knows of cases in which the authorities have forced people to slaughter their cattle that they might be saved from death by starvation. Hunger periods occur in every year, during which two-thirds of the Yakut population suffers from semi-starvation for a longer or shorter time. This period is not longer than a few weeks for those whose cattle during the winter were tolerably well nourished, so that in spring they quickly recovered their vigour, or for those who have such a number of cows that the latter produce calves at different times. The poor, however, suffer hunger for months, during which they live by the alms of their more fortunate neighbours. For them the most interesting subject of conversation is, Whose cow has calved? or, Whose cow will soon do so? Sometimes it happens that all the cows in a certain neighbour-

hood calve at the same time; then, if there is in that district no tillage, or if the grain harvest has failed, famine ensues. Poor people when asked how they manage to live through those frightful months said, "We go to bed and cover ourselves with the coverlet." They drink brick-tea and a decoction of various herbs, and eat splinters of larch and pine, if they still have a stock of them. They cannot obtain them in winter. No axe could then split the wood, which is frozen to the hardness of stone. Where they plant grain, and the harvest is fair, the circumstances are less stringent. On the whole therefore, the dependence on chance is almost tragical. If things that must be purchased rise in price to the slightest degree, if one neighbour has deceived another, or the merchant has cheated in weight, or if calves have died, any of these incidents come as heavy blows upon the barely established equilibrium of the family budget. A few such blows throw the household into the abyss of debt, from which it rarely, or with great exertion, emerges. Two-thirds of the families are in debt; one half of them for small amounts which can be repaid, but the other half are hopelessly indebted, the debts consuming the income year by year. Even amongst those who are called rich, the expenditure rarely surpasses two or three hundred rubles per year, and this they cannot win without hired labour, because the care of the herds which are large enough to produce this net amount far surpasses the power of an average Yakut family; therefore, only a large one, with well combined forces, can get along without hired labour. There are but few such families, and any co-operative organisation is strange to the Yakuts. They prefer to work individually at their personal risk and chances. Even individual handicraftsmen do not organise regular *artels* on the Russian type.

. . . . The size of the *sib* group has always been determined by economic facts. By virtue of an economic shock only does the *sib* begin to split up, and then first do the notions about blood tie make themselves felt to an appreciable degree. This they do in the following manner:—Two brothers, and still more, a father and son, cannot fall into two different *sibs;* nor can grandfather and grandson, or uncle and nephew in the male line and the first degree, do so during the life of the elder. But grandsons in the

male line may belong to different *sibs*, especially if the grandfather is dead. We have an especially good opportunity to observe the significance of economic motives in dividing up the *sibs*, and also to observe the insignificance of kin motives in the case of the *sibs* that are still complete, but in which new *sib* centres can already be perceived. These new centres are defined by the relations which are forming about them, although they have not yet acquired new names. They are all separated from each other by greater or less distances in space, and their territorial advantages vary. Also an important part of the property in these new group centres (house, garden, stock of hay, petty household wares and furniture), in case of the death of the owners, have no value except for members of the group in which they are. It is impossible, or not worth while, to transport them, and it is not possible to sell them, since there is no market.

In former times, when the chief wealth of the Yakuts consisted in droves of horses, the size and the conditions of subdivision or combination of the *sib* groups were entirely different. In that distant time we must believe that the consumption on the spot of products which had been obtained from the droves, or from hunting, served as the external condition of the existence and size of a *sib* group. Many traditions point to this fact. For instance, they tell us that if a Yakut slaughters an animal, the viscera, fat, and entrails are divided into portions of different size and worth, and distributed to the neighbours, who, having learned that the slaughtering was to take place, generally take turns in visiting the owner. To fail to give any neighbour a share is to make an enemy. To pass anyone over purposely is equivalent to a challenge, and will put an end to friendly relations between families. We are convinced of the antiquity of this custom by tradition, and by its dying out nowadays. In the places where civilisation has advanced the most it has lost much of its power. That it was a *sib* custom, we are convinced by certain usages at marriages and ceremonies of reconciliation. Distributions of meat are now a part of marriage ceremonies, and the chief dishes served at marriages consist of meat. The formulas of language employed in connection with this use of meat are

reminders that the ceremony has created relationships between the participants.

The strength of this custom was proved by a case observed by the author, who saw the gladness of a good-for-nothing fellow, who up to that time had done nothing but receive large shares, but who suddenly, by chance, drove a fat wild reindeer into a swamp, and so in his turn was enabled to make presents to his neighbours of portions of meat. No comparison would do justice to the self-satisfaction of this individual, when he at last served up the game which he had won. He reserved for himself almost nothing. Other things which are subject to immediate consumption, and can be distributed into small portions, are shared in the same way, especially dainties, like sugar, cookies, or other rarity. Vodka is always divided amongst all who are present, even the children getting a drop. Tobacco also is subject to this custom. It is not degrading but honourable to receive a gift of food from one who is eating, especially if he is an honoured person. It is a violation of etiquette to give little to a rich man and much to a poor man. The opposite is the rule. If one man's cow calves earlier than those of the others, custom requires that he shall share cream and milk with those neighbours who at that time have none. This explains the interest with which, in the spring time, when the cows give no milk, the Yakuts calculate and distribute information about anyone of the rich whose cow is about to calve. This also explains how the poorest people live through the starvation months. When the population is substantially equal, it is evident that these customs are not burdensome, and this is why they prevail especially amongst people of a middle class. The Yakuts would not believe the author when he told them that, in his country, there were rich and populous cities in which people sometimes died of starvation. They asked why anyone should die when he could go to eat with his neighbours?

The circumstances are in all respects more archaic in the northern provinces and more advanced in point of culture in the southern. In the latter the custom is already coming in to sell food to travellers, and even to neighbours, but in many parts of the north they consider it a shame to trade with food. Even the

poorest think it an offence if it is proposed to them to take money for lodgings or food. Travellers in winter take hay from the stacks on the meadows, with which to feed their animals, and it is regarded as right. These customs all give some coherence and permanence to the petty groups of the Yakuts which wander in the woods. When travelling, so long as they are in inhabited districts, they need not fear hunger, though they take no provisions with them. The custom constitutes a system of mutual insurance against the misfortunes of life.

. . . . Care for the poor and unfortunate has always been regarded as an obligation of the *sib*. Impoverished families are cared for in their houses, while the helpless and paupers go about amongst the householders and take their places at the table with the members. Trifling tasks are given them to perform. The author found that the poor and middle class people treated them better than the rich did. According to the notions of the people, it is sinful to despise the unfortunate, who are, however, distinguished from professional beggars living on alms. The latter often are not poor, and it is the belief of the people that the beggars often beg out of greed. The provision for the poor, however, is of a very wretched kind, for the object of the *sib* is to organise persons of equal power and equal right, and not to provide charity.

. . . . The custom of distributing fresh meat, and other things, which has been described, was convenient and perhaps necessary in a certain state of the society. The groups remained in close neighbourhood in order to realise those advantages. . . . .

The kumiss is spoiled in winter by the frost and in summer by the heat, and it does not bear transportation. The Yakuts have never known how to preserve meat by drying or smoking. Hence it was in the highest degree convenient for them to live in groups of such a size that the kumiss and the meat obtained from the cattle and horses could be used as soon as possible. They even have a tradition that horse thieves in ancient times tried to organise themselves into bands large enough to divide and eat up, in a night, the animals they had stolen. We must believe that in ancient times the fundamental grouping of the people consisted of bodies constituted upon the basis of a convenient consumption

of the product of a proportionate number of animals. . . . . Hence the distribution of kumiss and meat served as a symbol of peace, friendship, and union in the *sib*.

. . . . Right of private property in the house evidently did not exist amongst the ancient Yakuts. Even now they are inclined to regard the dwelling as a common good. Anyone who enters may stay as long as he will. A traveller has a right, according to their notions, to enter any house at any hour of the day or night, and establish himself so as to drink tea or cook food, or pass the night. The master of the house does not dare to drive out, without some important and adequate reason, even one who is offensive to him. In former times they had scarcely any permanent dwellings. They were nomadic, and carried with them all of the house but the framework, which later comers, in their turn, might use. The land belonged to nobody. The herds were considered the property of each separate nomadic group. The nominal owner was the head of the group.

. . . . When the Russians first came in contact with the Yakuts, the *sib* organisation had reached its highest development, and the headship of the *sib* was a dignity exclusively for war and the administration of justice. The groups were then just about what we now see. The elected government was even more nominal than it is now. All questions, as well economic as jural, were decided by a council of the elders. Even now the most independent individuals avoid making any important changes in their industry or sales or expenditures, without taking the advice of older relatives. Such conduct is approved.

. . . . The subdivision of property, and its consequence, the internal subdivision of the *sib* groups, became possible with the gradual introduction of horned cattle, which could be kept independently and in small groups. A drove of two or three head of horses had no sense; horses must be united into droves which could roam about the neighbourhood. No distance and no care could prevent them from roaming. Therefore no Yakut family of four individuals, at the minimum, could tend a drove of ten horses, which we may regard as the minimum. Moreover, the time necessary for the constant changes of position, protection, and care of such a petty drove is not a bit less than for one, two

or three times as large. We may take it as a rule that the larger the drove, the more the power of the group which owns it is set free for subsidiary occupations, hunting, fishing, and handicraft, and the better they are provided with food and implements. The social habits of the horses, which love to live in large droves, were a natural cause of the union of their keepers. The size of the droves depends at last on the size of the pastures, which vary much in these districts. Hence the differences in size of the *sib* groups amongst the Yakuts, as they are described in the traditions, consequences of which are not to be found, and which astonish us by their apparent arbitrariness. The case was changed when they moved from the grand and unbroken steppes to the small expanses broken by forests, their dwelling of to-day. In the latter places, the droves are comparatively broken up. Hence the unions of the men cannot endure. This difficulty is intensified by the necessity of speed in changing position, and of frequency in movement from meadow to meadow, when the herds are large. Consequently the economic arrangements come into strife with the traditional instincts of the *sib* and the community. We may take a drove of ten or fifteen head, consisting of five mares, one stallion, one two-year-old, one one-year-old, and two suckling colts, for the minimum unit herd of horses. We may take for the maximum herd, for a district amongst the Yakuts, from three hundred to five hundred head. The minimum would hardly suffice to keep from distress a family of four souls. The maximum would allow a community of fifty souls to live in comparative ease. Within these limits, the effort of the Yakuts to sub-divide and scatter over the country must be bounded. Some of their traditions and customs lead us to think that once there was a much greater concentration of people and accumulation of wealth amongst them than now, and that they were spread over the country even less regularly than they are now. In their legends, large expanses of territory are spoken of as being empty, while in others large numbers of people, with their cattle, are described as existing.

Out of the minimum unit drove of horses consisting of five mares, one stallion, one two-year-old, one one-year-old, and two suckling colts, only one grown horse could be killed per annum,

and the kumiss would not suffice for four souls. The requirement of kumiss is from 15 to 20 litres per person per day; one mare gives that quantity only in summer, and then she is considered a very select specimen; a middling one gives only half so much. In winter many are for a time not milked, and older ones, even if the food is adequate, give in winter not more than 3 or 4 litres a day. Consequently each person needs in a year from 5,475 to 7,300 litres of kumiss. One mare gives in a year from 2,000 to 2,500 litres, if she is milked the whole year around. Hence there is needed for a grown person two and a half milch mares, and for the three grown persons in a Yakut family, seven and a half milch mares.

The largest number of settlements contain four or five huts, with twenty or thirty souls. Occasionally one is met with in which there are forty or fifty huts, and some hundreds of souls. The winter houses for the most part stand separately, and at some distance from each other, but near to the hay-stacks. In this detail the influence of the later economic system dependent upon hay is to be seen. The summer dwellings, on the other hand, seem to represent more nearly the ancient mode of life. The summer group consists of many huts which stand quite close together, although not apparently in order, but distributed according to the convenience of water and the pleasantness of the place. They are distributed so that the *sibs* stand together, which is probably an ancient feature.

In the populous nomadic settlements of ancient times, whether in the south or the north, the Yakuts arrived at the basis on which their civil existence is based. This basis was the breeding of horses. There their best instincts were nourished; arts and handicrafts took their origin; songs and legends were composed; the system of their group-life was developed and strengthened. There they acquired the custom of enduring misfortune and conquering hardships in friendship and in common.

In everything that they did in those times we seem to see a reflection of the character of the powerful animals which then constituted their chief wealth and the basis of their existence. The breeding of horses demands special qualities of mind and special knowledge, especially knowledge of geography and

physiography, very careful power of observation, and sagacity in the selection of places and in the regulation of the wanderings, so as to secure good adaptation to the facts of climate, season of the year, distribution of water, and depth of snow. It demands of the drovers cleverness, courage, decision, and a knowledge how to execute quick and complicated evolutions, so as to direct, arrest, or drive on to the proper place the obstreperous herds. Hence the custom of discipline and of group-wise action, which is to this day observable amongst the Yakuts.

. . . . In all their legends and traditions, the stealing of women and cattle is presented as the cause of war. Not less frequently the occasion was the obligation of blood-revenge. The blood of a man, if spilt, required atonement. The children of the murdered took vengeance on the children of the murderer to the ninth generation. In ancient times the responsible person having been captured, was not killed at once, but horribly tortured.

The Yakut meeting, with ceremonies for reconciling quarrels, has to this day a *sib* character. Gifts are made for the entertainment of the blood relatives, a small part of which comes into the hands of the injured party. Many surviving customs show how strong was once the solidarity of the *sibs,* and how deeply the feeling of responsibility for the conduct of its members had penetrated into the sentiments of the *sib.* The Yakuts are very zealous for the honour of their *sib* comrades. They like to hear the praises of their tribe, sub-tribe, or *sib.* When they hear blame of the same, they feel sorrow. Hence the wonderful righteousness of the Yakuts within the *sib,* which often excites the astonishment of the observer. A man who is entirely indifferent when he sees quarrelling, cheating, robbery, oppression and extortion, will take them very seriously to heart if he sees them happen within the *sib,* or so that a *sib* comrade is the victim, especially if the guilty person belongs to another *sib;* on the other hand, they will often shield evident wrong-doing by *sib* comrades. Their tribunals are comparatively just in *sib* affairs, but between members of their own and another *sib* they decide on behalf of their comrade. One of them explained this very easily by saying that, in a certain case, the thing at stake should have been divided equally, but that one of the parties belonged

to another tribe: "Could we, for his sake, harm one of our own?" In modern times, however, in the same measure as the *sib* groups have broken up the convenience of tending herds, and have scattered themselves more widely, the active exchange of mutual services between the members has declined. The need of mutuality has disappeared; they have come in contact more rarely; their feelings have become hardened, and there remains only a dim reminiscence of a common origin.

. . . . Mass meetings, or popular assemblies, are held, in summer, in the open air, not far from the meeting-house of the *sib*. The oldest and most influential sit in the first rank, on the bare ground, with their legs crossed under them. In the second rank sit or kneel the independent but less wealthy heads of households. In the third rank are the youth, children, poor men, and often women, for the most part standing, in order the better to see and hear. In general it is the first row which decides affairs; the second row sometimes offers its remarks and amendments, but no more. The third rank listens in silence. Sometimes the passions are aroused, and they all scream at once; but the decision of the question is always submitted to the first rank. It conducts the deliberation. The orators come from its ranks. Oratory is highly esteemed, and they have some talented orators. The first rank are distinguished for riches and energy. They can submit or withhold questions; but decisions are never considered binding until confirmed by a mass meeting. According to their traditions, in ancient times, a promient *rôle* in these assemblies was played by old men, who must, however, have distinguished themselves, and won prestige, by good sense, knowledge, and experience. They decided questions according to the customs, and gave advice when the *sib* was in any difficulty.

. . . . The divisions of the Yakuts are the *Ulus,* the *Nasleg,* and the *aga-ussa* (= *sib*). Taking into account three provinces or districts, the author shows that two *Naslegs* consist of only one *aga-ussa,* fourteen of two, fifty-eight of three, fifty-nine of four, seventeen of five. The number of those that contain more *aga-ussa* is small, but there is one each containing thirteen, fourteen, nineteen, thirty-four, and forty-three.

. . . . Re-allotments of land between the *Naslegs* within the

same *Ulus,* occur frequently; between the *aga-ussa* of the same *Nasleg,* still more frequently; and between the allotments of the same *aga-ussa* almost every year, with the purpose of equalisation. There is in every *aga-ussa* a sworn functionary, chosen for a number of years, whose name is a corruption of the word deputy. Anyone, rich or poor, may be deputy, if he is a just and sensible man. He must understand all about the advantages and disadvantages of land. He has the difficult task of equalising the allotments. If he is incompetent, he makes mistakes. Sometimes he cheats intentionally, whence arise quarrels and fights. Sometimes the deputies fight, if they meet to decide a question between the *aga-ussa* of a *Nasleg.* Each *Nasleg* selects an officer, who has the oversight over the deputies in order to allay their disputes. The Yakuts say that the allotments to the *Naslegs,* within a *Ulus,* ought to be readjusted every forty years. The allotment is made by an assembly of all the officers and head men. Within the *Naslegs* the re-allotment takes place at undefined periods, when some new necessity arises; for instance, from the necessity of setting off a glebe for the church, or when meadows have been spoiled by a freshet. Nowadays the deputies act only administratively to execute the decisions of the *sib* assembly. Individuals are constantly asking for a readjustment of allotments, upon all sorts of pleas. Leaving out of account the bits thus added or subtracted, it may be said in general that individuals dispose of their allotments without limit of time, and even give them in inheritance. In the north, a certain part of the meadows is apportioned to certain homesteads. These are regarded as the inalienable property of the householder. Only gores and strips which lie further off, or are purposely left for that purpose, are subject to division. By means of them equalisation is brought about.

. . . . Pastures and woods almost everywhere are in the undivided use of all the inhabitants of a locality, without regard to the *aga-ussa* or *Nasleg* to which they belong. It is true that rich men in many places have divided amongst themselves separate cattle ranges out of the common lands, and have fenced them, but their *sib* comrades look upon such land-grabbing with disfavour, and if the rich man dies or loses influence, they try to

break down his enclosures and throw open the land again. There is a strife of interest between cattle owners and tillers; the latter enclose their lands; the former drive their cows home three times in the day. The enclosures make this journey longer. In general the *sib* group reconciles itself to the individual disposal of a plot of land which has been won by clearing woods or meadows, or of mowing lands obtained by drying up swamps and ponds, when it has been established by prescription, and even if the appropriated land is made inheritable, provided that the plot is not large and is all utilised by the owner. But if the size is great, or the owner rents any of it, the *sib* asserts its rights. The only question then is whether the owner has won back from the land a remuneration for the labour and capital expended by him upon it. Often they undertake large clearings or drainages communally. Those who have a share in the land thus won are, first, those who lived there before; then all the *aga-ussa* of a *Nasleg* in proportion to their share in the work, and their need of land. . . . .

. . . . It is established beyond a doubt that when the Russians came in contact with the Yakuts, polygamy existed amongst the latter. They had a word for all the offspring of one man, and another for his offspring by a particular wife, if the interpretation is correct. If it is it would entail the inference that once the mother family existed amongst the Yakuts. This is confirmed by the tradition that many *sibs* with father descent, and even whole *Naslegs,* got their names from women. The Yakuts have no special word for the precise designation of a family group consisting of a man, with his wife and his children. The current word is *Kergen,* but this is an ambiguous word; most probably it means *dwellers.* In answer to inquiries, the most various statements were given. The author heard this word used in the sense of all those whom the head of the household was bound to maintain, including temporary inmates.

The son of the house was no longer considered a *Kergen* when he married and established a house of his own, but all inmates and labourers, no matter what their status or relationship, are considered *Kergen.* [The author so uses the word; he does not say members of the *Kergen.*] The marriage customs and

legends in which there is reference to the stealing of wives in no distant past, seem to point to an origin of this house-group from slavery. There are even direct evidences of this, for an ancient word, synonym of *Kergen-Chahar*, meant slave or cowboy, and seems to have gone out of use on that account. In the *Kergen*, the younger are subjected to the elder, and all are subject to the head, whether it be a father, older brother, grown-up son, or, in rare cases, a mother, if she is a clever and energetic widow. Custom does not seem to admit sisters or aunts. The head can give away and squander everything, if he chooses. He can even give away his children as labourers to outside persons.

. . . . Such is the declaration of all Yakuts; nevertheless, at the present time, these statements describe only a fictitious system. In fact, the Yakut family presents now a different picture. The subjection of the young and of women comes under a more general law; the subjection of the weak to the strong, and of those-who-have-not to those-who-have. The author knows of many cases in which the father, older brother, or the uncle forced the younger members of the family into marriage, or put them out to work for others under very hard conditions, taking to himself all the payment, and also other cases in which the father disposed of the property of the son, took away from him his axe and canoe, and sold hay, mown and saved by him, completely independently. The son complained of his hard fate, but could do nothing. He also knows of a case in which parents sold their eight-year-old daughter to a Russian official who was travelling through. He saw and heard of many cases in which elders cruelly beat members of the household, especially women and children, yet he knows of an equal number of cases of an opposite character,—cases in which younger brothers played a more important *rôle* in the family than older brothers, in which a wife, unrestrained by the presence of strangers, behaved rudely to her sick husband, even beat him, and openly kept a lover in the house; in which a daughter, knowing that she was the only one in the house able to labour, did not obey her parents, did whatever she chose, refused an advantageous marriage, and went about with the young men before the eyes of all; in which old people did not dare to sell a pound of butter or a load of hay, or to buy

anything for themselves, without asking the consent of a grown son. All these cases were not considered by anybody unusual, and did not call forth from the community any more condemnation than cruel or unjust treatment of children.

. . . . There is no such thing as any strictly patriarchal relationships, or any deep-rooted or cultivated feeling of respect for the old, amongst the Yakuts. A young Yakut said: "They not only do not feed, nor honour, nor obey, but they scold and often beat the old people. With my own eyes, I have more than once seen Yakuts, poor and rich, bad and good, beat their fathers and their mothers." They behave especially badly with decrepit and feeble-minded parents. Their chief object in dealing with such is to wrest from them any bits of property they may still retain. Thus, as the old people become more and more defenceless, they are treated worse and worse. It was no better in ancient times. Force, the coarse force of the fist, or the force of hunger, rules in the modern Yakut family, and seems to indicate the servile origin of that family. Once the author saw how a weak old man of seventy beat with a stick his forty-year old son, who was in good health, rich, and a completely independent householder, who had just been elected to an office in the *sib*. The son stood quietly and did not dare even to evade the blows, but that old man still had an important amount of property at his disposition, and he ruled the family by fear that he could deprive any recalcitrant one of a share in the inheritance.

. . . . In well-to-do families, where there is a great quantity of cattle, or where the right to large advantages from land, or the possession of well-established trade, provides an opportunity to win from hired labour, and so an important revenue is obtained, independently of personal labour, the rule of the father and mother as proprietors, especially the rule of the father, is strengthened and maintained for a long time, namely, to the moment when the old people become decrepit and lose the capacity to comprehend the simplest things. Generally they die before that time. This state of things is maintained by the spread of Russian ideas and laws. In the old-fashioned Yakut family, the economy of which is founded almost entirely on cattle-breeding, and in which constant personal supervision is re-

quired, thus making personal strength and initiative indispensable, the moment of the transfer of rule into the hands of the son is reached much earlier. It occurs still earlier in poor families which live exclusively by hand-labour and by the industry of the strongest and best endowed. The old people strive against this tendency in vain. The young people naturally strive to avail themselves as fully as possible of the results of their labour, and as soon as they feel strong enough, they begin to struggle for their rights. The parents are dependent on the sons, who could go away to earn wages. Hence they say: "It is more advantageous for us Yakuts, in this frozen country of ours, to have many children than to have much money and cattle. Children are our capital, if they are good. It is hard to get good labourers, even for large wages, but a son, when he grows up, is a labourer who costs nothing; nevertheless, it is hard to rear children." The author knew of cases in which wives put up with the presence of mistresses in the house, considering that an inevitable consequence of their own childlessness. The death of children is accepted coldly in populous districts, but in the thinly settled ones is sincerely bewailed. Sometimes they take to drink or to idleness when they have lost their children.

The greatest number of suicides are old people who fear a lonely old age. The treatment they receive fully accounts for this.

If the parents, on account of their own deficiencies, or the exceptional hard-heartedness of a son, have not been able to discipline him, then sooner or later a strife arises in the family. The women are in such cases more yielding. They are physically weaker and have scarcely any rights. As members of the *sib*, they have no rights to land, property, or independent existence. They surrender very soon. Most frequently they make no attempt to resist: there is no place for them outside of the family. It is another matter for the boys. They accustom themselves to form judgments on communal questions; they quickly acquire a knowledge of the rights of men, and become saturated with the communal spirit which refuses to acknowledge any privileges except personal superiority and work. In proportion as the quantity of labour accomplished by them increases, and in that

way their cleverness and skill in the arts of life are proved, they demand more confidently and persistently that attention shall be given to their voices in the family, and that their wishes shall be fulfilled. If not they are not willing to perform the labour which is required of them, or do it so negligently, while tormenting their elders with constant reproaches, that the latter gradually yield. As soon as a father perceives this disposition in his son, he hastens to give him a separate allotment, if his own circumstances will possibly admit of it; otherwise the power inevitably goes over to the son. Sometimes the elders continue to hold a nominal authority; sometimes the son allows this consolation, as long as they live; but nothing is really done without the sanction of the actual sovereign of the family. The young man takes the place of the old one as the object of attention and obedience, and he makes himself master, as well of the parents as of the labourers who are without rights or voice in the family. A man who was reproached for his behaviour to his mother, said: "Let her cry; let her go hungry. She made me cry more than once, and she begrudged me my food. She used to beat me for trifles."

. . . . In a family in which the rights and powers have been reduced to equilibrium, so that all the relations of the members are established, the dominion of the head, whoever he is, over the labour and the property of the members is unlimited. The organisation is really servile. Especially pitiful is the position of the women who play no *rôle* in the *sib,* and therefore can expect no protection from anybody. The author advised a woman to appeal to the *sib,* when she complained that her husband exploited her labour and that of her half-grown son: that he was extravagant and wasteful, so that he was likely to reduce them to pauperism. "The head!" said she, "how often I have complained to him! he listens and says nothing, and after that my husband is still more quarrelsome and more perverse." Another woman said: "The man is the master; it is necessary to obey him; he works abroad and we at home." This work abroad consists for the most part in taking part in the village assemblies and in constant loafing from house to house. It is true that the man acquires information about wages and prices; but he also keeps

to himself the monopoly of all external relations, and even for the absence of any of the housemates without his consent he demands a strict account. To acquire an extra gain, win food or money, or earn something by outside work is considered more desirable than to follow heavy daily labour which would maintain the life of the family from day to day. If the head of the household has grown-up children, the amount of work which he does is very insignificant. He works like the others only at the hay-harvest; the rest of the time he wanders about, looking out, it is true, for the external interests of the family to which his care is now restricted, although formerly it extended to the *sib*. Inside the house he is treated with almost slavish respect and consideration. His presence puts an end to cheerfulness, the excuse for which is that he must maintain respect.

It is a custom, the reason for which seems to be the desire of the father not to lose power in the house, that he often gives allotments to his sons and takes into the house in their place a grandson, or a nephew, or a hired man. These persons, after they have lived some years in the house, and worked in the family acquire the same right to a part of the inheritance as if they had been children. The Yakuts say that a father may deprive a son of his inheritance, but the author never knew an example of it. He knew of cases in which sons sued fathers, alleging that the allotments which they received after many years' labour were not as large as they should have been. . . . .
—W. J. SUMNER, "The Yakuts," *Journal of the Anthropological Institute,* 31:65–78 [whole paper, 65–110]. Abridged from the Russian of Sieroshevski. (*Yakuty,* published by the Imperial Russian Geographical Society, St. Petersburg, 1896, 1:720 ff.)

AGRICULTURE AND CATTLE-BREEDING

. . . . When man sets to work to add something from his own resources to what Nature does for him, a simple solution of the problem lies in an attempt to bottle up as it were the sources of his food supply. Even now many of those Australian races whom we regard as standing on the lowest step of civilization, strictly prohibit the pulling-up of plants which have edible fruit, and the destruction of birds' nests. They are content

simply to let Nature work for them, only taking thought not to disturb her. Wild bees' nests are often emptied with such regularity that a kind of primitive bee-keeping grows up. So with other animals: man allows them to lay up the provision which he subsequently takes away, and thus is led in another direction to the verge of cultivation. Drege instances the case of *Arthratherum brevifolium*, a grain-bearing grass in Namaqua-land, the seed of which the Bushmen take from the ants.

Here Nature frames a check for man, and teaches him thrift. On the other side, the tendency to settlement is encouraged. Where large provision of fruits is found whole tribes come at the gathering time from all sides, and remain as long as the food lasts. Thus to this day the Zanderillos of Mexico come to the sandy lowlands of the Coatzacoalco when the melons are ripe; or the Ojibbeways assemble round the marshes where the *Zizania*, or water-rice, grows; or the Australians hold a kind of harvest festivity in the neighbourhood of the marsileaceous plants which serve them for grain. Thus on two sides the barriers of savage nature are broken down. The son of the desert is beginning to look ahead, and is on the way to become settled. From this stage to the great epoch-making discovery that he must commit the seed to the earth in order to stimulate Nature to richer performance, may in point of time have been far, but as we think of it the step does not seem long.

The beginnings of cattle-breeding show yet further how man succeeded in knitting an important part of Nature with his own fortunes. The roaming barbarian, who for certain periods is quite away from mankind, tries to get from Nature either what is most like himself, or what seems less likely to make him conscious of his own weakness and smallness. Now the animal world, though separated by a deep gulf from man of to-day, includes, in its gentler and more docile members, the natural qualities with which he likes best to associate himself. The delight which Indians, or Dyaks, or Nile-negroes take in taming wild animals is well known. Their huts are full of monkeys, parrots, and other playmates. It may be that the strong impulse to companionship which exists in man may have had more to do with the first effective step towards acquiring domestic animals

than any eye to the use to be made of them. Thus we find no less among the lowest races of existing mankind than in the remains of civilization anterior to the introduction of domestic animals and cultivated plants, the dog as the sole permanent companion; and his usefulness is limited enough. Generally, indeed, it is difficult to draw any certain conclusion from the purpose which an animal serves in our civilization, as to that for which man first associated him with himself. In Africa and Oceania the dog is used for food. We may suppose that the horse and the camel were in the first instance tamed, not so much for the sake of their speed as for the milk of their females. A certain friendship, even in more civilized countries, attaches the shepherd to the members of his flock. Thus cattle-farming is a pursuit which arouses more enthusiasm than agriculture. It is more often the men's work, and exercises a far deeper influence on all private and public relations. Nowhere in Africa do the fruits of the field form to the same extent as the herds the basis of life, the source of pleasure, the measure of wealth, the means of acquiring all other desirable articles, especially women; lastly even currency, as when *pecus* gave its name to *pecunia*. Many a race has carried this identification of its existence with its favourite animal to a dangerous excess. Even when their stage of culture is well advanced these cattle-farming peoples suffer from the narrow basis in which their livelihood rests. The Basutos are, all things considered, the best branch of the great Bechuana stock, but the theft of their cattle alone was enough to reduce them to impotence. Similarly the rinderpest of recent years has ruined the Masai and Wagogo.

But the great influence which cattle-breeding produces upon a race is to make it restless. Pastoral life and nomad life are practically synonymous. Even our own alp-system, with its changes from valley to mountain pastures, is a fragment of nomadism. Pastoral life requires wide spaces, and agrees with the restless tendencies of the more forcible races. The desert is preferred to the fertile country, as more spacious. The Rhenish missionaries had specially to undertake the task of inducing some of the Namaqua tribes to settle on fertile oases. How little nomads care to utilise Nature more thoroughly we may learn

from the fact that as a rule they hoard no provision for the winter. In the country about Gobabis on the Nosob River, Chapman found the grass growing a yard high, and so thick that it would have been easy to make hay in abundance; but as a rule the Namaquas allowed it to be burnt without attempting to use it. This sort of indifference tends to increase the contrast between nomadism and agriculture, and assumes the character of a great obstacle to civilization. Prjewalski, in his account of his first journey, has described this boundary, the boundary of both Nature and culture, between steppe and farm land, between "the cold desert plateau and the warm, fertile, and well-watered plain of China, intersected by mountain-chains," as marked with wonderful sharpness. He agrees with Ritter that this question of situation is what decides the historic fortunes of races which inhabit countries closely bordering on each other. When he enters the Ordos country—that steppe region, so important in history, which lies in the bend of the upper Hoangho,—he says of the races in those parts: "Dissimilar as they are, both in mode of life and in character, they were destined by Nature to remain alien to each other, and in a state of mutual hatred. To the Chinese, a restless nomad life, full of privation, was inconceivable and despicable; the nomad looked with contempt at the life of his agricultural neighbour with all its cares and toils, and esteemed his own savage freedom the greatest happiness on earth. This is the actual source of the distinction in character between the races: the laborious Chinese, who from time immemorial has attained to a comparatively high and very peculiar civilization, always avoided war, and looked on it as the greatest misfortune; while on the other hand the active and savage inhabitant of the Mongolian desert, hardened against all physical consequences, was ever ready for raiding and reiving. If he failed he lost but little, while in the event of success he secured the wealth accumulated by the labour of several generations."

Here we have the contrast between the most characteristically nomad race and the most sedentary agriculturists,—a contrast with whose historical results in many gradations we shall meet as we go along, in the chapters of this book which describe races. Only we must not forget that sedentary life in this degree is

found in a race of ancient civilization. It is otherwise with the "natural" races. When we consider the position of agricultural barbarians, we shall often no doubt attach less weight to the difference, in other respects of so much ethnographic importance, between nomadic and settled races; for what is the significance of a sedentary mode of life if its great civilizing advantage, continuity, and security of life, and if possible of progress, is taken out of it? As a matter of fact even the best cultivators among the African races are astonishingly movable; and the majority of villages, even of the smaller races, seldom remain for many generations in the same spot. Thus the distinction between pastoral and agricultural life becomes much smaller. The African Negro is the finest agriculturist of all "natural" races, except perhaps some Malayan tribes, as, say, the Battaks of Sumatra. He contends with a luxuriant nature, fells trees, and burns the coppice, to make room for the plough. Round the hut of a Bongo or a Musgu you will find a greater variety of garden plants than in the fields and gardens of a German village. He grows more than he requires, and preserves the surplus in granaries above or under the ground. But the force of the soil and the man is not utilised to the full. It is a small cultivation, a kind of gardening. Codrington's expression, "horticultural people," used by him of the Melanesians, may be applied to many other "natural" races. Apart from the fact that the man does not in many cases devote himself wholly to agriculture, imperfect tools tend to perpetuate the lower stage. The women and children, with the unpractical hoes shown in our illustrations, do no more than scratch the surface. The plough, not to mention the harrow, has nowhere become customary among genuinely barbarous peoples; manuring, except for the ashes of the burnt brushwood, just as little. One much more often comes across terracing and artificial irrigation.

Agriculture, limited in the tropics by the hostility of the forces of Nature, is equally so in the temperate zones by the lesser fertility of the soil, and the less favourable climate. It was never carried on here to the same extent as in the tropics, but rather formed a subsidiary branch of economy; it fell mainly into the hands of the women, and was a provision only for the utmost

need. In contrast to the wide diffusion which newly-imported plants obtained among the Africans, it is significant that the New Zealanders, though they were from the first very fond of potatoes, never planted any of their own free will, but, on the contrary, grubbed up almost the whole of the ground which Captain Furneaux had tilled for their benefit. Still, it is just here that, with persistence, agriculture renders possible higher developments than cattle-farming can do. It is steadier, and forces on a man the wholesome habit of labour. In Mexico and Peru it is followed by the accumulation of capital, and the development of industry and trade; and therewith by the occasion for a fuller organisation of social ranks. European cultivation is an entirely new system; apart from its more effective implements and methods, it proceeds on broader lines. It has abandoned the gardening style possessed by the agriculture of Negroes and Polynesians, even by that of the industrious peoples of east and south Asia.

This kind of agriculture does not make the daily bread secure. Even the most active cultivators in Africa have to go without security against changes of luck. The behaviour of the elements cannot be reckoned upon. Drought especially does not spare these tropical Paradises; and famine often forms a scourge of the population in the most fertile regions. This alone is sufficient to prevent these races from passing a certain line, beyond which their development to a higher civilization is alone possible. All the good of a good year is trodden out by a famine year with its results of cannibalism and the sale of children. In the tropics, too, damp makes the storage of provisions difficult. In Africa, again, the devastation of ants and weevils makes it hard to keep the chief crop, millet, till the next harvest. However much they plant, and however plentiful the harvest turns out, everything must be consumed in the year. This again is one reason why the negroes brew so much beer. Herein, however, whatever may be the fault of the climate, undoubtedly lies one of the imperfections whereby agriculture will necessarily be beset among a race in whose customs foresight and endurance are hardly developed, and are incapable of linking the activities of individual persons and individual days with a strong thread of necessary

interdependence. And here, too, human foes, those "communists of nature" who equalise all property, take good care that the steady prosperity of agriculture shall not create too deep a gulf between it and nomadism.

In the matter of food, "natural" races, even when they carry on agriculture, strive with avidity to get animal adjuncts. Contrary to our physiological notions, fat and blood are consumed in quantities even by purely tropical races, like the Polynesians; and it is just in these things that gluttony is practised. The nearest approach to vegetarianism is made by the rice-planting peoples of east Asia and the banana-planting negroes of the forest, as formerly by the civilized races of America. The races of the far north eat, no doubt, more than we suppose of wild plants; but they rely especially on the fat and flesh of sea-mammals. Some nomad groups support themselves with superstitious exclusiveness on meat and milk. Roots are eagerly sought. Salt is liked in all parts of the earth, and the fondness for meat and blood is based in some measure on the craving for it. By rapid and thorough roasting the salts of the meat-juices are rendered more highly serviceable. Every race in all parts of the earth has hit upon some means of enjoying caffein compounds and alcohol. Tobacco is not the only narcotic herb that is smoked. The methods of chewing betel and coca are strikingly alike. The knowledge of many poisons has come to civilized races from barbarians.—F. RATZEL, *History of Mankind*, 1:88–93.

ON THE ORIGIN OF AGRICULTURE

. . . . When we examine the intricate conditions under which agriculture is carried on amongst us at the present day, it becomes a matter of no small difficulty for us to imagine a period when man should have raised food from the soil without any of the, to us apparently essential, pre-suppositions having been complied with. With us, apart from the primary indispensability of a suitable climate and soil, we see that the farmer requires security from domestic and foreign foes, in other words a reliable government, a certain amount of capital and labour, freedom from animal pests, a fixed settlement and—that primary incentive to toil in

civilisation—want. Eliminating capital and labour, we will proceed to ascertain how far these conditions are fulfilled among agricultural savages at the present day, and to what extent they were likely to have been fulfilled at the period when man discovered how to cultivate the soil, or when circumstances so developed themselves that man passed insensibly into the agricultural age. If we begin with the obstruction to cultivation caused by the ravages of animals and vegetable parasites and thieves, we find that some of these pests can be overcome, but that in the presence of others, man appears to be helpless. Caillée calls attention to the fact that the Foulahs, an advanced nation of husbandmen, "bring their fowls with them into the fields to eat up the insects." E. Dieffenbach mentions that the Maories collected the caterpillars which destroyed their crops, and Captain Speke says that at Karague the natives in order to save themselves from starvation caused by the depredations of sparrows, "were obliged to grow a bitter corn which the birds disliked." On the other hand, there are pests which savages have not been able to overcome. Dr. H. Barth refers to the destructiveness of the black and red worms. On the Amazons the Saüba ants are so destructive that the inhabitants said "it was useless trying to grow anything thereabouts," and Mr. Thos. Belt gives a similar account of the leaf-cutting ant at St. Domingo. Mice are also heavy tax-gatherers. Rats and mice are so destructive to rice-fields that the Dyaks have to select new ground every four or five years. Neither is man free from the larger pests. At Ehetilla, Sir S. Baker describes how the elephants destroyed the dhourra crops, and Capt. Cameron records that where a "large herd of elephants had passed, the scene of destruction was amazing." Finally Bradley tells how the rhinoceros, as well as elephants and buffalo, "often nearly ruin the villagers by breaking into the rice and maize fields," and he also mentions that tigers were in one district so destructive to human life as to drive the husbandmen to seek fresh quarters. There is no end to examples of this class, and as these hindrances to agriculture still exist in semi-civilised and sparsely-populated countries, as well as, to a limited extent, with us at home, it is not unreasonable to infer that the efforts of man from the time

of his earliest attempts to grow crops have been similarly obstructed.

We come then to the conditions of general absence of security to life and property from foreign foes. Throughout the early part of his narrative Captain Speke refers, page after page, to the ravages committed by the Watuta; Bates speaks of the destruction of the plantations of the Mundurucus by the Pararuates, and Capt. Bruce tells us how the Abyssinian agriculturists had been driven to the mountain tops. Livingstone describes how the agricultural Bakalahari were hunted south, and how the country was destroyed by the Ajawas. Mungo Park refers to the utter destruction caused by African wars, and Capt. Cameron tells a similar story. Spencer St. John refers to the annihilation of agricultural districts by the Kayan head hunters. The pages of Dieffenbach's "Travels in New Zealand" give us similar pictures. In Fiji and Tahiti matters were not much better. There is, in fact, hardly a book on travels in savage or barbarous countries which does not bear evidence of the destruction to agriculture by invading tribes, and yet, in spite of them all, agriculture has continued to progress. Indeed Mr. H. H. Johnston gives us a graphic description of the manner in which a warlike race, the Masai, after turning the country into a wilderness, have almost, in spite of themselves, taken again to agriculture.

With regard to the protection afforded to private property as an inducement to cultivate the soil, this is a question which hardly affects our inquiry, for in early days it is doubtful whether there existed an individual right in agricultural produce. "Judging from the evidences in so many countries of the existence of village communities holding land in common," Sir John Lubbock concludes that "there seems strong reason to suppose that in the history of human progress the individual property in land was always preceded by a period in which movable property alone was individual, while the land was common. It is difficult to imagine that since the land was common, that the produce was not likewise common." As evidence in this direction we may cite the case of the Australians who divide the spoil of the chase or the gin's vegetable collections without any reference to the individuals who obtained them. The North American Indians,

the Peruvians, the Chittagong Hill Tribes, the Borneans, and the South Sea Islanders, all appear to have cultivated in common and to have possessed common rights in the produce.

Then as to a settled abode. When we look into history we find nations were apparently ever given to wandering. After a while wanderings become restricted. The Khirghiz, ancient nomads, are now bound in the steppes by certain limits, beyond which they cannot roam without coming into collision with other hordes; they have also fixed summer and winter quarters. Of the Kurdish tribes (the Kochas) Mr. A. H. Layard says they change encampments according to season; they go to high peaks in summer, and to the low grounds of Tigris and Zab in the winter. The Wahumba, a branch of the great Masai nation, move, according to Capt. V. L. Cameron, "from place to place in search of pasture" for their cattle. Brough Smyth, in his work on *The Aborigines of Victoria* says "it is necessary for a tribe to move very frequently from place to place, always keeping within the boundaries of the country which it calls its own—now to the spot where eels can be taken, often to the feeding grounds of the Kangaroo," &c., &c., and Sir George Grey in describing the roots eaten by the West Australians says, "some of these are in season in every period of the year, and the natives regulate their visits to the different districts accordingly." The Obongos similarly wander in search of vegetable foods and wild animals. The Negritos, the supposed aborigines of the Philippines, have no fixed abodes "but shift from place to place within a circumference of four or five leagues." In Borneo we have the wandering Pakatau and Punau, who move to a new spot "when they have exhausted the jungle around of wild beasts and other food." To go to the New World, we find that the Abipones roam from one district to another accordingly as they found their food. The Nehannes spend the summer on the coast and the winter inland. The Haidahs have temporary dwellings for the summer, besides permanent well-guarded villages, and the same may be said of the Nootkas. The aborigines of Florida were, according to De Vaca, great wanderers, and Capt. R. W. Coppinger says the Fuegians have seasonal changes of dwelling.

In all the above cases—and there is no end to them—the

tribes wander either for the sake of food for themselves or for their flocks. We can understand their doing so well enough. But it astonishes us not a little to meet with tribes who cultivate the soil, and who if not exactly wanderers like the Fuegians and Australians, are at least wanting in what we call fixed settlements. J. Pallme tells us that owing to the scarcity of water "there are certain districts in Kordofan, the agricultural population of which inhabit two different villages in the year," one in the wet season for cultivation, and one in the dry season to be near the wells, and Mr. H. M. Jenkins, F.G.S. (privately communicated) informs us that something very similar to this exists in Norway and Sweden to this day. The Coroades in the Brazils who cultivate the soil, "very commonly quit their abodes and settle where new fruits are ripening, or where the chase is more productive. Mr. Im Thurn refers to the periodical desertion of their fields by the Indians, and which movement he ascribes to superstition. According to D'Albertis some of the natives of New Guinea on the death of the head of the family, forsake house and plantation and build a new house and prepare a new plantation some distance away from the old home. Some of the Maories were nomadic agriculturists. The Ainos, we are told by Miss I. Bird, are continually exhausting and clearing fresh land. The Dyaks do not desert their farms because the land is exhausted, but because it is less trouble to cut down fresh jungle than to eradicate the weeds which have sprung up after the padi has been gathered. Sir Emerson Tennent states that "the Village Veddahs, who hold a position intermediate between the Rock-, or Wild-, and the Coast-Veddahs, are still migratory in their habits, removing their huts as facilities vary for cultivating a little corn and yams." Of the Chittagong hill tribes, Capt. T. H. Lewin tells us: "The site of the village is changed as often as the spots fit for cultivation in the vicinity are exhausted." The Tsawkoo Karens abandon both villages and plantations after three years' cultivation. The Lepchas are nomadic agriculturists who remain as long as three years in the same locality. The Juangs "are still semi-nomadic in their habits, living together in villages during a portion of the year, but often changing the sites, and occupying huts in the midst of their patches of cultivation, whilst crops

are on the ground." Finally, the Santals are so fond of the chase that "when through their own labour, the spread of cultivation has effected this denudation [of the forests] they select a new site, however prosperous they may have been in the old, and retire into the backwoods."

There are more explanations than one of the continued existence of wandering habits among semi-agriculturists. The roving disposition may be due in part to the old customs of a passing state in which perhaps search for food and superstition in connection with death, on which occasion many tribes think it necessary to shift their quarters, may have much to do. But it is probably rare that cultivated land is deserted on account of its arriving at the state described as "exhausted," *i. e.* when crops can no longer be grown in consequence of the withdrawal, through too much cultivation, of their food constituents, for savages do not cultivate on such an intense system as to bring about that state of the soil. Indeed, Sir John Lawes says well when he tells us that exhaustion means more particularly that weeds have choked the growing crop. In some parts of Sumatra it would appear that the alang-alang grass takes possession of the cultivated ground, and drives the Lampongs to clear forest land which does not give such good crops of rice as the other level lands. But there appears to us to be considerable justification for believing that savages may have searched for fresh lands when their soils have arrived at that condition which farmers express by stating that for particular crops the soil loses its productive power. This condition is due to unnatural causes brought about by cultivation, and which a brief reference to Darwin's *Variation of Animals and Plants under Domestication* (2d ed., 1885) may help to explain. Darwin has pointed out that in natural selection the variation is for the benefit of the plant or animal undergoing change, whereas with cases of selection by man the variation is brought about for man's benefit and not for that of the creature that man for the time being is tampering with, and that as a consequence a weakened constitution may attend such domestication. This is the reason why at the present day crops of turnips or clover cannot be grown consecutively on the same land, a reason which is confirmed by the fact that agricultural

chemists do not consider the unsuccessful continuous growth of these crops to be due to withdrawal of the proper food constituents. It may be objected, how is it then that wheat can be grown tolerably well continuously on the same soil? The answer is that wheat, having been cultivated so many thousand years—over 5000 at least (we are unable to trace the original wild species)—has, through time, to a considerable extent overcome this weakness, whilst the turnip, which has barely been an agricultural crop for two hundred years, has not yet had time to adapt itself in the same degree to altered circumstances as wheat has. To continue, Darwin was inclined to think that when cereals were first cultivated the ears and grain may have "increased quickly in size in the same manner as the roots of the wild carrot and parsnip are known to increase quickly in bulk under cultivation." Therefore, when cultivation had already become a fixed art, the crop cultivated improved in quality, but then came the weakened stage during which the more enlightened savage agriculturist, giving way also to old tradition, forsook the old soil and searched for new.

We now come to a very potent factor, and one to which most people would ascribe the savage's first attempt at cultivating the soil—namely, want of food. We are so accustomed to look forward to the morrow that it becomes difficult for us to conceive the existence of a people who give it no thought. To us it seems strange that any man knowing he has no food for the next day should either devour the whole of his present stock or not take any other precaution towards securing the necessary supply until the necessity makes itself painfully apparent.

Whatever may be our preconceived notions, we shall now see that savage man does not trouble about his to-morrow's meals, any more than does a beast of the field. Mr. E. M. Curr, who spent some twenty years in daily contact with native Australians, emphatically records his opinion as follows: "It is a noteworthy fact connected with the Bangerang, and indeed, as far as I am aware, with the whole aboriginal population (notwithstanding what Captain Grey asserts to the contrary in connection with the blacks of West Australia) that as they neither sowed nor reaped, so they never abstained from eating the whole of any

food they had got, with a view to the wants of the morrow. If anything was left for Tuesday, it was merely that they had been unable to consume it on the Monday. In this they were like the beasts of the forests. To-day they would feast—aye, gorge—no matter about the morrow. So also they never spared a young animal with a view to its growing bigger." Dr. Robertson quoting from Dr. Edward Bancroft, who visited Guiana at the close of the seventeenth century, says of the Indian, who then, as now, cultivated yams, "he is then least solicitous about supplying his wants when the means of satisfying them are most precarious and produced with the greatest difficulty." The testimony of a traveller two hundred years later proves that that Indian is still the same improvident being. De Vaca, who spent nine years among the savages of Florida, describes how these wanderers were always in want of sufficient food. Of the Hottentots, who had been taught something already by the missionaries, W. J. Burchell complains, "Some of the people cultivate a little corn, but so foolish and improvident are they, that as soon as the harvest is gathered in, they eat, I may almost say, night and day, till the little they have is devoured." He adds that they are always either in a state of feast or fast. Of the Bachapins he says, "that although agriculture is considered important, it is not carried far enough to put the natives in plenty, and they often suffer want." Speaking of an agricultural tribe of Arabs, James Hamilton bewails a similar want of foresight. In a description of the Columbians we are told, "Life with all these nations is but a struggle for food." Yet it was the missionaries who introduced agriculture among them, and the same author in an account of the wild tribes of Central America, tells us: "No regularity is observed in eating, but food is taken at any hour, and with voracity; nor will they take the trouble to procure more, until the whole stock is consumed and hunger drives them from their hammocks. The Poyas and Guajiqueros seem to be the only tribes who have any idea of providing for the future." The New Mexicans (Apaches and others) making more or less pretensions to agriculture, seldom "raise a sufficient supply for the year's consumption." Even the Mexicans were an improvident people and want was no stranger to them. Al-

though agriculturists, the Malays, "as in all parts of the interior, have barely enough food for their own consumption." Major W. F. Butler reports on the half-breeds of Manitoba: "Even starvation, that most potent inducement to toil, seems powerless to promote habits of industry and agriculture;" he refers to the great privations these men undergo, and adds that *like the Indians,* "they refuse to credit the gradual extinction of the buffalo, and persist in still depending on that animal for food." Although the dying out of the bread-fruit trees with the Tahitians, their staff of life, was pointed out to the natives by the missionaries, the Rev. W. Ellis informs us that they could not be induced to plant fresh ones. Finally Livingstone, records how foolish the African tribes thought him when he occasionally deposited "date seeds in the soil."

On the other hand, we have a few instances where a minimum of forethought concerning food is exhibited. Mr. Darwin noticed "that the Fuegians when they find a stranded whale bury large portions in the sand." And we have the case of the Poyas and Guajiqueros already referred to. The Esquimaux store up large quantities of meat for winter's use, and the Wapato and other Hyperboreans to some extent, preserved nuts, berries, &c., also for winter's food. The Wild Veddahs were said to preserve flesh in honey in hollow trees hermetically sealed with clay. Mr. Darwin quotes Sir Joseph Hooker and Sir Andrew Smith in order to show how savages occasionally suffer from famine, but there is no instance on record in which a savage race was driven to cultivation by want of food, nor are we likely to discover such an instance.

In a case of vegetable and fruit famine, when the otherwise neglected wild food begins to affect man and beast, savages commence to poach on their neighbours' grounds, and, being repulsed, take to eating the weaker members of their own tribe, as is done to this day in Australia. A succession of famines, or even a prolonged one, necessarily leaves more available food afterwards for the survivors and hence any lurking idea that there exists a necessity to cultivate the ground would be successfully dissipated. Allowing that a savage, wiser than the rest, had an inkling that the cultivation of vegetable fruits might help to avoid

disastrous dearth, it is very doubtful whether he would have the power to enforce his views, for, after all the chiefs of savage races such as the Australians, Fuegians, and Bushmen, can exert little influence over their co-members beyond the enforcement of tribal customs. The question of a sudden introduction of agriculture can in our view be only connected with a state of comparatively high mental activity in the savage. It will, therefore, be useful to glance for a moment at his mental state.

In his detailed account of the life of the Fuegians Darwin says: "We can hardly put ourselves in the position of these savages to understand their actions," the difficulty being due partly to our want of knowledge of these people, and partly to the fact that they apparently cannot or do not reason. We are told of the Bushmen "that whether capable of reflection or not, these individuals never exerted it," and Spix and Martius say, unfortunately the Indian is so unaccustomed to exercise his intellectual qualities that it is very difficult to obtain satisfactory information from him. As final and thoroughly reliable evidence regarding the inactivity of the savage intellect, we may accept the conclusions arrived at by Sir John Lubbock, in his introductory chapter to the "Origin of Civilisation." On page 7 he states, "Though savages always have a reason, such as it is, for what they do and what they believe, their reasons often are very absurd;" and on page 9, "Again, the mind of the savage, like that of a child, is easily fatigued, and he will then give random answers to spare himself the trouble of thought." Hence a savage mind is not likely to grasp the real position which would arise from cultivation of the soil, and which would be the inducement to turn to husbandry. So that if we allow that famine or forethought for food induced the savage to turn agriculturist we should be crediting him with a power of immediate adaptation to circumstances which he does not possess.

Amongst the rudest tribes we find a well defined division of labour between the sexes. The men do the hunting and fishing, and the women the cooking and the general work which goes under the name of drudgery. The women, being the weaker sex, are also terribly knocked about. Sir John Lubbock, in summing up the evidence of travellers on the position of the women says:

"Their wives, or dogs, as some of the Indians [of North America] call them, are indeed well treated as long as they do all the work and there is plenty to eat; but throughout the continent, as indeed among all savages, the domestic drudgery falls to their lot, while the men hunt, and make war, &c.," and . . . . he refers to "the harsh, not to say cruel treatment which is almost universal among savages." There are a few exceptions to this rule. The Veddahs appear to treat their women with some sort of decency, and the Maori women held a not unsatisfactory position. Mr. H. Hale says that the Caroline Islanders, known for their peaceable disposition, treated their women almost as equals, and according to Serpa Pinto the Ambuellas treat their women with some consideration, but, he adds, that as a rule among other tribes the women are the most abject slaves of their husbands. Mr. H. O. Forbes bears witness to the miserable position of the women among the Aléfurus. However, the consensus of opinion regarding the bad treatment and the slave-like position of the women among savages is so clear that we need make no further quotation.

The chase, snaring, and fishing are undoubtedly more pleasant pastimes than digging up yams or diving for sea eggs. There is an important savage pastime which we must not omit to mention. The letting of blood and the watching of the wretched victim as it shivers out its existence are pleasures in which savages revel. We have had to deal with aboriginal Australians and South Sea Islanders in Queensland, and have caught them in the act of playing with their prey in a very much crueller manner than a cat plays with a mouse. We have further evidence of this love for blood in the tortures the North American Indians inflicted on their prisoners; in the horrible religious rites of the Mexicans; in the Dyak head hunting expeditions; in the cannibal feasts of Haïtians, Maories, Fijians, and Tahitians, and in the blood-thirstiness which is met with in all parts of Africa. The men, being the stronger sex, reserve these pleasures to themselves, and to the women is thus left the work necessary to the welfare of the tribe, and in which, according to the men's notions, there is no fun. In one of his numerous works on the North American Indians, Mr. Schoolcraft says: "It is well known that

corn planting and corn gathering, at least among all the still *uncolonised* tribes, are left entirely to the females and children, and a few superannuated old men;" and, he adds, that this labour is not compulsory, but is looked upon as a just equivalent for man's labour in the chase and defence. We would, however, be inclined to think that the men had very much the better part of the bargain. When a party or tribe of blacks on the coast range of Queensland shift camp, the men, women, and children spread out in a long line or semi-circle, driving all before them. No woman, excepting perhaps an old gin, will dare to throw her waddy at a started wallaby or kangaroo-rat, but she will call the attention of the nearest man or boy to its presence; and *vice versâ* if a man pass an edible root, he will tell the woman next to him to dig it up. A man will pick berries to eat as he goes by, or climb a tree after an opussum, but when it comes to touching the soil, that is the woman's work. In other cases the women are sent out alone to gather vegetable food, while the men go out on the chase, or remain at their ease preparing for it, *i. e.*, repairing and making spears, &c.

As the women appear everywhere with the savage in his lowest known stage to be told off for all work in connection with the collection of vegetable food, it is more than probable that they rather than the men were the first to make tentatives towards acts which may be regarded as originating agriculture.

In speaking of the West Australians, Mr. A. C. Gregory explains that in digging up the wild yams, the natives "invariably re-insert the head of a yam, so as to be sure of a future crop, but beyond this they do absolutely nothing which may be regarded as a tentative in the direction of cultivating plants for their use." This step towards cultivation among savages is the earliest of which we have any knowledge, but it can hardly be considered to be the first step. How the women discovered that the yam heads alone would suffice for propagation is left open to conjecture. The heads might not have been so palatable as the full body of the yam, and to save themselves the trouble of carrying the whole to the camps the women probably left the cut off heads on the ground or in the holes, and these tops have then

grown into good edible roots. For a considerable period, doubtless, the women would not take much notice of this fact, but (had not European immigration interfered) it is easy to imagine how to save themselves the further trouble of having to hunt for fresh yam fields, they would have poked the yam head into the holes, and later on kicked a little of the disturbed soil over them. Some of the Sakeys of the Malay Peninsula have arrived at this possible stage. They content themselves with poking the tubers of the various vegetables consumed by them into soil which appears propitious without any previous preparation. In this case cultivation, if one may so term it, has already become of some importance and the sort of the soil has become a consideration. These people have maize, which they do not appear to cultivate, and it is, of course—owing to maize being indigenous to America—of late introduction.

The first attempt or rather step towards the cultivation of grain may have arisen in a similar way to that of the West Australian yams. It is, however, probable that when man began to harvest and carry the crop to the camp many seeds were scattered on the track, and thus there would be some foundation for supposing that the cultivation of the edible grasses began near the home for the time being. The lowest form of the cultivation of seed-propagated crops is to be found among the Juangs, for with them the seed is "all thrown into the ground at once to come up as it can." But this stage of cultivation, crude as it is, records already considerable progress. In the harvesting of self-sown edible grasses, many of the seeds would be trodden slightly into the ground or covered with dust and being thus to a small extent preserved the ensuing crops would probably be improved ones, if not in quality at any rate in quantity. Later on the women might purposely cover up the seed or scratch it in with their digging sticks. And still later, as the Borneans do, they would go a step further and put the seed in a hole made with a pointed stick, which act, in fact, amounts to dibbling. Further progress is exemplified by the Lepchas, who already scratch the upper layer of vegetable mould for the reception of the seed, and lastly real tillage is arrived at by digging the ground over, as we see it done by the Mandans with their hoes made of buffalo

or elk shoulder blades. This development of the art of agriculture thus appears to proceed smoothly enough, but in practice it must have been an exceedingly slow one, for every progressive step, from the sole harvesting of the seed to its first rude sowing, means an advance in the mental powers of the savage adopting it. To this day some of the North and West Australians reap annually thousands of acres of panicum and grind it into meal, but they do not in any way cultivate this cereal. Dr. Ch. Pickering was astonished that "on the Sacramento River of California, where, by a singular approximation to the use of grain, minute seeds of grasses and other plants constitute an article of food, the natives, nevertheless, have not advanced beyond gathering the spontaneous crop." The Mongols of Ala-Shan rely for a very important portion of their sustenance on the sulhir grass (*Agriophyllum Gobicum*), which grows on the bare sand, and which Prezhevalsky calls the gift of the desert, but it is not cultivated. We need not be astonished at those people in not cultivating edible grasses which are of such great importance to them, for we find even well advanced tribes and nations relying upon similar wild growing food. Some of the Maories largely consumed the amylaceous seed covers of the *Elacocarpus hinau* and although agriculturists, they did not cultivate the plant, and Dr. H. Barth mentions that among the Bagirmi, a settled agricultural nation, "rice is not cultivated, but collected, in great quantities after the rains."

Again the first step towards tillage of the soil would much depend on the nature of the plant which is the subject of the first experiment, if one may so term it. "When portions of the stem or tubes of the taro (*Arum esculentum*), are thrown away by the side of streams, they naturalise themselves easily." Cocoa nuts, when strewn about strike root and thrive. And we think a curious light is thrown on the manner in which plants successively became cultivated, by the Guiana Indian's statement that when cassava was originally given them they tried at first to grow it by sowing the seeds and planting the tubers, and only succeeded in its cultivation by discovering at last that cuttings must be stuck into the ground. From this account we may infer that

these Indians had already cultivated plants propagated by their seed or their tubers. . . . .—H. Ling Roth, *Journal of the Anthropological Institute,* 16:109–22 [whole paper, 102–36].

THE ECONOMIC LIFE OF PRIMITIVE PEOPLE

. . . . Decidedly unclear conceptions are widely prevalent as to the system of exchange of primitive peoples. We know that throughout Central Africa, from the Portuguese possessions in the west to the German in the east, there is a *market-place* every few miles at which the neighbouring tribes meet every fourth to sixth day to make mutual exchanges. Of the Malays in Borneo we are told that each larger village possesses its weekly market. The first discoverers of the South Sea Islands give us reports of distant "trading trips" which the natives undertake from island to island in order to make mutual exchanges of their wares. In America certain products, the raw material for which is to be found only in a single locality—for example, arrow-points and stone hatchets made of certain kinds of stone—have been met with scattered throughout a great part of the continent. Even among the aborigines of Australia there are instances of certain natural products, such as pitcher-plant leaves and ochre colour, which are found in but one place, and yet circulate through a great part of the country. In such phenomena we have a new and interesting proof of the civilizing power of trade; and in the primeval history of Europe itself this power has everywhere been assumed as operative when industrial products have been brought to light through excavations or otherwise far from their original place of production. Our prehistoric studies have woven together a whole spider's web of suppositions and have even brought us to speak of prehistoric "industrial districts." Our ethnographic literature speaks similarly of industrial localities for the manufacture of arms and the plaiting of mats in Borneo, for pottery at several points in New Guinea, for boat-building in several coast districts of the Duke of York Archipelago, for iron-working in negro countries, etc.

In opposition to this it must be asserted positively that *trade* in the sense in which it is regarded by national economy—that is, in the sense of the systematic purchase of wares with the object

of a profitable re-sale as an organized vocation—can nowhere be discovered among primitive peoples. Where we meet native traders in Africa, it is a question either of intermediary activity prompted by European and Arabian merchants, or of occurrences peculiar to the semi-civilization of the Soudan. Otherwise the only exchange known to the natives everywhere is exchange from tribe to tribe. This is due to the unequal distribution of the gifts of nature and to the varying development of industrial technique among the different tribes. As between the members of the same tribe, however, no regular exchange from one household establishment to another takes place. Nor can it arise, since that vocational division of the population is lacking which alone could give rise to an enduring interdependence of households.

One fancies the *genesis of exchange* to have been very easy because civilized man is accustomed to find all that he needs ready made at the market or store and to be able to obtain it for money. With primitive man, however, before he became acquainted with more highly developed peoples, value and price were by no means current conceptions. The first discoverers of Australia found invariably, both on the continent and on the neighbouring islands that the aborigines had no conception of exchange. The ornaments offered them had no power whatever to arouse their interest; gifts pressed upon them were found later on strewn about in the woods where they had been cast in neglect. Ehrenreich and K. v. den Steinen had as late as 1887 the same experience among the Indian tribes of Brazil. Yet there was from tribe to tribe a brisk trade in pots, stone hatchets, hammocks, cotton threads, necklaces of mussel-shells, and many other products. How was this possible in the absence of barter and trade?

The solution of this riddle is simple enough, and has now been confirmed by direct observation on the spot, while previously it could only be assumed. The transfer ensues by way of *presents,* and also, according to circumstances, by way of *robbery, spoils of war, tribute, fine, compensation,* and *winnings in gaming.* As to sustenance, almost a community of goods prevails between members of the same tribes. It is looked upon as theft if a

herd of cattle is slaughtered and not shared with one's neighbour, or if one is eating and neglects to invite a passer-by. Anyone can enter a hut at will and demand food; and he is never refused. Whole communities, if a poor harvest befall, visit their neighbours and look to them for temporary support. For articles of use and implements there exists the universal custom of *loaning* which really assumes the character of a duty; and there is no private ownership of the soil. Thus within the tribe where all households produce similar commodities and, in case of need, assist each other, and where surplus stores can only be utilized for consumption, there is no occasion for direct barter from establishment to establishment. Exceptions occur when purchasing a wife and making presents to the medicine-man, the singer, the dancer, and the minstrel, who are the only persons carrying on a species of separate occupations.

From tribe to tribe there prevail rules of *hospitality*, which recur with tolerable similarity among all primitive peoples. The stranger on arriving receives a present, which after a certain interval he reciprocates; and at his departure still another present is handed him. On both sides wishes may be expressed with regard to these gifts. In this way it is possible to obtain things required or desired; and success is the more assured inasmuch as neither party is absolved from the obligations of hospitality until the other declares himself satisfied with the presents.

That this custom of reciprocal gifts of hospitality permits rare products of a land or artistic creations of a tribe to circulate from people to people, and to cover just as long distances from their place of origin as to-day does trade, will perhaps become more apparent to us when we consider how legends and myths have in the same way been enabled to spread over half the world. It is almost inconceivable that this could have been so long overlooked when even in Homer the custom of gifts of hospitality is attested by so many examples. Telemachos brings home from Sparta as present from Menelaos a bowl of silver which the latter had himself received in Sidon as a gift of hospitality from King Phaidimos, and his father Odysseus receives from the Phaiakes garments and linen and articles of gold as well as a whole collection of tripods and basins. All this he conceals on

his arrival, as is well known, in the sacred grove of the nymphs in his native rocky island of Ithaca. Think of the poet's narration as an historical occurrence, and imagine what would have happened had Odysseus been recognised by the wooers at the right moment and slain; the presents of the Phaiakes would have rested well concealed in the grotto of the nymphs down to our own times, and would have been brought to light again by a modern archæologist. Would he not have explained the whole treasure as the storehouse of a travelling merchant of the heroic age of Hellas, especially as he could have appealed for support to the actual barter which occurs quite extensively in Homer?

Among many primitive peoples peculiar customs have been preserved which clearly illustrate the transition from presents to exchange. Among the Dieris in Central Australia, for instance, a man or a woman undertakes for a present the task of procuring as reciprocal gift an object that another desires, or of hunting for him, or of performing some other service. The one thus bound is called *yutschin*, and until the fulfilment of the obligation wears a cord about his neck. As a rule the desired object is to be procured from a distance. In New Zealand the natives on the Wanganui river make use of parrots, which they catch in great numbers, roast, and preserve in fat, in order to obtain dried fish from their fellow-countrymen in other parts of the island. Among the Indian tribes of Central Brazil trade is still an interchange of gifts of hospitality; and the Bakairis translate the Portuguese *comprar*, to buy, by a word signifying 'to sit down,' because the guest must be seated before he receives his present. In the countries of the Soudan the constant giving of presents frequently becomes burdensome to the traveller "since it is often only a concealed begging." "The gifts of hospitality that are received in the camp," remarks Staudinger, "are in accord with good custom and are often very welcome. But with every stop in a larger town things are frequently obtained from high and low which are ostensibly given as a mark of respect to the white man; in reality they arrive only because the donors expect a three- or four-fold response from the liberality of the European. Indeed I am convinced that many a poor woman

has herself first purchased the hen or duck that is to be presented in order to do a profitable piece of gift business with it."

The Indians of British Guiana appear to stand at the intermediate stage between gift-making and trading. Im Thurn reports of them: "There exists among the tribes of this, as of probably every other similar district, a rough system of distribution of labour; and this serves not only its immediate purpose of supplying all the tribes with better-made articles than each could make for itself, but also brings the different tribes together and spreads among them ideas and news of general interest. . . . . Each tribe has some manufacture peculiar to itself; and its members constantly visit the other tribes, often hostile, for the purpose of exchanging the products of their own labour for such as are produced only by the other tribes. These trading Indians are allowed to pass unmolested through the enemy's country. . . . . Of the tribes on the coast, the Warraus make far the best canoes, and supply these to the neighbouring tribes. They also make hammocks of a peculiar kind, which are not, however, much in request except among themselves. In the same way, far in the interior, the Wapianas build boats for all the tribes in that district. The Macusis have two special products which are in great demand amongst all the tribes. One is the ourali, used for poisoning arrows and the darts of blowpipes, the other is an abundance of cotton hammocks; for, though these are now often made by the Wapianas and True Caribs, the Macusis are the chief makers. The Arecunas grow, spin, and distribute most of the cotton which is used by the Macusis and others for hammocks and other articles. The Arecunas also supply all blowpipes; for these are made of the stems of a palm which, growing only in and beyond the Venezuelan boundary of their territory, are procured by the Arecunas, doubtless by exchange, from the Indians of the native district of that palm. The Tarumas and the Woyowais have a complete monopoly of the manufacture of the graters on which Indians of all the tribes grate their cassava. These two remote tribes are also the great breeders and trainers of hunting-dogs. . . . . The True Caribs, again, are the most skilful potters; and though the Arawaks frequently, and the other Indians occasionally, make vessels for

their own use, yet these are by no means as good as those which, whenever possible, they obtain from the Caribs. The Arawaks make fibre hammocks of a kind peculiar to them. . . . . The Ackawoi alone, so far as I know, have no special product interchangeable for those of their neighbours. These Indians are especially dreaded and disliked by all the others; and it is possible that the want of intercourse thus occasioned between this tribe and the others forced the Ackawoi to produce for themselves all that they required. It is further possible that to this enforced self-dependence is due the miserable condition of most of the Ackawoi.

"To interchange their manufactures the Indians make long journeys. The Wapianas visit the countries of the Tarumas and the Woyowais, carrying with them canoes, cotton hammocks, and now very frequently knives, beads, and other European goods; and, leaving their canoes and other merchandise, they walk back, carrying with them a supply of cassava-graters, and leading hunting-dogs, all which things they have received in exchange for the things which they took. The Macusis visit the Wapiana settlements to obtain graters and dogs, for which they give ourali-poison and cotton hammocks; and they again carry such of these graters and dogs as they do not themselves require, together with more of their own ourali and of their cotton hammocks, to other Indians—to the Arecunas, who give in return balls of cotton or blowpipes; or to the True Caribs, who pay in pottery."

Once originated exchange long retains the marks of its descent in the rules that are attached to it and which are taken directly from the customs connected with gifts. This is manifested, in the first place, in the custom of payment in advance which dominates trade among primitive peoples. The medicine-man does not stir his hand to help the sick until he has received from the sick man's relatives his fee, which in this case closely resembles the present, and has openly announced his satisfaction. No purchase is complete until buyer and seller have before witnesses declared themselves satisfied with the objects received. Among many peoples a gift precedes or follows a deal; the "good measures" of our village storekeepers, and "treating" are

survivals of this custom. To decline without grounds an exchange that has been offered passes among the negroes as an insult, just as the refusal of a gift among ourselves. The idea that services interchanged must be of equal value can hardly be made intelligible to primitive man. The boy who performs a bit of work expects the same pay as the man, and the one who has assisted for one hour just as much as the one who has laboured a whole day; and as the greed on both sides knows no bounds, every trading transaction is preceded by long negotiations. Similar negotiations, however, are also the rule in the discharge of gifts of hospitality if the recipient does not find the donation in keeping with his dignity.

As time passes exchange creates from tribe to tribe its own contrivances for facilitating matters. The most important of these are markets and money.

Markets are uniformly held among negroes, East Indians, and Polynesians in open places, often in the midst of the primeval forests, on the tribal borders. They form *neutral* districts within which all tribal hostilities must cease; whoever violates the market-peace exposes himself to the severest punishments. Each tribe brings to the market whatever is peculiar to it: one honey, another palm-wine, a third dried meat, still another earthenware or mats or woven stuffs. The object of the interchange is to obtain products that cannot be procured in one's own tribe at all, or at least cannot be produced so well and so artistically as in neighbouring tribes. This must again lead each tribe to produce in greater quantities than it requires those products which are valued among the tribes not producing them, because in exchange for these it is easiest to obtain that which one does not possess one's self, but which others manufacture in surplus quantities. In each tribe, however, every household produces the current market commodity of exchange that enjoys this preference. Hence it follows, when it is a question of a product of house industry, such as earthenware or wares made of bark, that whole villages and tribal areas appear to travellers to be great industrial districts, although there are no specialized artisans, and although each household produces everything that it requires with the exception of the few articles made only

among other tribes which they have grown accustomed to and which exchange procures for them merely as supplements to household production.

Such is the simple mechanism of the market among primitive peoples. Now with regard to *money*. How much has been written and imagined about the many species of money among primitive peoples, and yet how simple the explanation of their origin! *The money of each tribe is that trading commodity which it does not itself produce, but which it regularly acquires from other tribes by way of exchange.* For such article naturally becomes for it the universal medium of exchange for which it surrenders its wares. It is its measure of value according to which it values its property, which could in no other way be made exchangeable. It is its wealth, for it cannot increase it at will. Fellow tribesmen soon come to employ it also in transferring values, for because of its scarcity it is equally welcome to all. Thus is explained what our travellers have frequently observed, that in each tribe, often indeed from village to village, a different money is current, and that a species of mussel-shells or pearls or cotton stuff for which everything can be purchased to-day is in the locality of the following evening's camp no longer accepted by anyone. The consequence is that they must first purchase the current commodities of exchange before they can supply their own needs in the market. In this way, also, is to be explained the further fact, which has come under observation, that exchangeable commodities naturally scarce, such as salt, cauri shells, and bars of copper, or products of rare skill, such as brass wire, iron spades, and earthen cups, are taken as money by many tribes not possessing them; and above all is to be mentioned the well-known circumstance of objects of foreign trade, such as European calicoes, guns, powder, knives, becoming general mediums of exchange.

Certain varieties of money thus secure a more extensive area of circulation. They can even make their way into the internal trade of the tribal members through employment as mediums of payment in the purchase of a bride, for compensations, taxes, and the like; certain kinds of contracts are concluded in them. But there is no instance of a primitive people, in the absence of

European influence, attaining to a currency or legal medium of payment for obligations of every kind and extent. It is rather the rule that various species of money remain in concurrent circulation; and very often certain obligations can be paid only in certain kinds. Changes in the variety of money are not infrequent; but on the other hand we sometimes find that a species will long survive the trade of the tribes from which it has gone forth, and will continue to serve in the inner transactions of a tribe, playing a singular, almost demoniacal, rôle, although, as regards their means of sustenance, the members of the tribe have nothing to buy and sell to one another. From an old interrupted tribal trade of this nature is to be explained the employment as money of old Chinese porcelain vessels among the Bagobos in Mindanao and the Dyaks in Borneo, the shells (dewarra) of the Melanesians, and the peculiar kinds of money of the Caroline Archipelago, for which special laws and administrative contrivances are necessary in order to keep this dead possession in circulation at all. Otherwise the State does not interfere as a rule in these matters; and in the large territorial formations of Africa, such as the kingdom of Muata Yamwo, for instance, there are therefore different currencies from tribe to tribe. But even where one kind of money gains a greater area of circulation, its value fluctuates widely at the various market-places; generally, however, it advances in proportion to the distance from its source.

Markets and money are intimately related so far as money in its character as a medium of exchange comes under consideration. But not every individual species of money that is met with among a primitive people has necessarily arisen from market trade. In its full development money is such an involved social phenomenon that it is natural to suppose that various influences associated with its past have been united in it. Thus, for instance, the origin of cattle-money seems to be bound up with the fact that, among the peoples referred to, the domestic animals represented the wealth and the means of gathering wealth. That for the purchase of a bride and for similar ends many tribes do not receive the current money, but for such purposes prescribe certain other objects of worth, appears to point to the admissibility of the assumption that in the complete development of money, along

with the main current, various subsidiary streams may have played a part.

From the standpoint of the total cultural progress of mankind the most important result of this survey, however, remains, that money as the favourite exchange commodity furnished a medium that bound together men from tribe to tribe in regular peaceful trade, and prepared the way for a differentiation of tribes in the matter of production. In the circumstance that all members of the same tribe or village preferably carried on, along with the earning of their sustenance, other work of a definite type, lay the possibility of an advance in technical knowledge and dexterity. It was an international, or interlocal, division of labour in miniature, which only much later was succeeded by division of labour from individual to individual within the nation, or the locality. Moreover the direct importance of the market for personal intercourse at this stage must not be undervalued, especially in lands where trading outside the market is so unusual that even travellers wishing to buy something direct are regularly refused with the words "come to market." In this one is involuntarily reminded of the prominent position that the market occupied in the social and political life of the peoples of classical antiquity.

But it is always a very *one-sided development,* permitting only to individual tribes the organization of production and trade just described. In this way is to be explained that most extraordinary phenomenon that in the interior of continents where no difficulties in communication oppose the passage of certain attainments in technical skill from tribe to tribe, it has been possible for peoples of very primitive economic stamp to remain unchanged by the side of others of higher development throughout thousands of years. One of the most remarkable examples of this nature is offered in Central Africa by the pigmy race of the Batuas or Akkas, still standing at the stage of the lower nomads, which keeps strictly within the zone of the primitive forest, but on definite days appears at the market-places of the surrounding negro tribes to exchange its chief economic product, dried meat of animals killed in the hunt, for bananas, ground-nuts, maize, and the like. In fact in some parts even a more primitive form

of trading has been maintained between these pigmy people and their neighbours, in that at the period when the fruit is ripe the Batuas break into the fields of the negroes, steal bananas, tubers, and corn, and leave behind an equivalent in meat.[1] The fact that the Batuas are clever hunters appears here to have caused the neighbouring tribes to neglect the production of meat through hunting and cattle-raising. On the other hand it is said that the pigmies do not even make their own weapons, but procure them in trade from the Monsus and other tribes.

Of this one-sided development another and much more widespread example is offered by the *smiths,* who not merely among many tribes of Africa but sporadically in Asia and in southeastern Europe form a hereditarily distinct caste, whose members, whether regarded with bashful awe or contempt, can neither enter into a marital nor other social alliance with the rest of the people. This strange phenomenon has hitherto been explained as a matter of remnants of subject tribes preserving to their conquerors the art of metal-working, which had otherwise perished, because the victorious race was ignorant of it. It is, however, also conceivable that a voluntary dispersal of such tribes took place and that the very difference of nationality, coupled with the carrying on of an esoteric art, placed them wherever they settled outside the community of the people.

In individual instances the carrying on of such a tribal industry in this exclusive manner leads to the rise of what travellers usually designate now as *industrial peoples,* because they do work for all their neighbours; now as *trading peoples,* because one meets them in all the markets of a more extensive district, and because they monopolize the trade in certain wares. We

[1] "The method by which the Veddah is able to procure his arrow-points—which he does not make himself—is interesting. He betakes himself under cover of night to the dwelling of a Singhalese smith, and places in front of it a leaf to which the desired shape is given. To this he adds a present of some kind, wild honey, the skin of an animal, or something similar. During one of the following nights he returns and expects to find the object ordered finished. If he is satisfied, he will deposit another special gift. The smiths never refuse to execute the orders at once. If they do, they may be certain at the next opportunity to be made the target for an arrow. Moreover their labour is abundantly rewarded by what the Veddah gives in return."

have an instance of the former, when the consumers resort to the district where a special tribal industry flourishes, in order to get the desired wares at the seat of manufacture; of the latter, when the producers bring to the tribes lacking them such wares as they produce beyond their own requirements.

As an example of the first form of this evolution, the little tribe of the Osakas may be cited, which has its home in the valley of the Ogowe to the east of the Lolo River. Lenz reports concerning it: "The Osakas are divided into five or six villages, each of which contains sixty to a hundred huts; compared with their numerically so important neighbours, such as the Fans and the Oshebo-Adumas, they are thus destined to play an altogether passive rôle in the history of those countries. In spite of this, however, the Osakas appear to be not altogether insignificant; for among them I found many individuals belonging to the most widely different tribes, frequently from regions quite far distant. The Osakas are recognised as the best smiths, and all the surrounding tribes,—the Oshebo-Adumas, the Akelles, the Awanshis and even the Fans,—buy of them a great part of their implements for hunting and war, although the last-named tribe itself excels at this handicraft. By the Oshebo-Adumas the iron wares of the Osakas are then brought down to the Okandes and to the Apinshis and Okotas dwelling between the rapids of the Ogowe, these last tribes on their part being but little skilled in iron-work and devoting themselves exclusively to the slave-trade. From there, through the medium of the Iningas and Galloas, weapons of this kind find their way as far as the sea-coast."

"The Oshebo-Adumas generally pay for these weapons with palm-oil and ground-nuts, while the Fans, who are the most expert huntsmen of all these various tribes, give in exchange for the spears and swordlike knives dried and smoked meat, chiefly of the antelope, the wild boar, the porcupine, the field rat and the monkey. In all the Osaka villages I saw a bustling life. As must always be the case where such widely different tribes meet together, quarrelings were extremely frequent there and often assumed great proportions."

A typical example of the second form is offered by the Kiocos

and the Kanjocas in the southern part of the Congo basin. Of the latter Wissmann reports: "The Kanjoka country is particularly rich in iron, and there are some excellent smiths there. Salt also is produced, so that the Kanjokas, with the products of their country and their iron manufacture, undertake commercial expeditions to the south as far as the Lunda country." The Kiocos dwell in the kingdom of Lund itself, dispersed among the Kalundas, but have their own chiefs who are tributary to the Muata Yamwo. The Kiocos are partial to placing their villages in the woodland, for they are preëminently excellent hunters, gather gum from their forests, and to obtain wax carry on a species of wild-bee keeping. They are also clever smiths, and not only make good hatchets, but can also repair old flintlocks and even fit them with new mounts and stocks. They clothe themselves in animal skins; the art of making vegetable cloth is little known to them. Their women plant chiefly manioc, maize, millet, ground-nuts, and beans. The products that the Kiocos obtain from the exploitation of their forests they exchange on the west coast for wares, chiefly powder, with which they then betake themselves into the far interior in order to buy ivory and slaves. The ivory obtained through trade they dispose of, while the slaves they procure they incorporate with their household. The Kiocos esteem slaves above all as property. They treat the slave women as they do their wives, and the men as members of the household, and part from them so very unwillingly that in the Kioco country it is quite exceptional for travellers to be offered slaves for sale. On their hunting voyages they have penetrated farthest towards the east; and there, before entering upon their journey homewards, they usually barter a part of their weapons for slaves. Then for the time being they arm themselves again with bow and arrow. They rightly enjoy the reputation of being as good hunters as they are crafty and unscrupulous traders; and in a masterful manner they understand how to overreach and dispossess the better-natured and more indolent Kalundas.

This picture is often repeated in the negro countries. One readily sees that it does not adapt itself to any of the usual categories of economic history. The Kiocos are no hunting people,

no nomads, no agriculturalists, no industrial and trading nation; they are all these at once. They act as intermediaries for a part of the trade with the European factories on the coast. At the same time they carry on some mediary traffic of their own in which they display the peculiar aptitude of the negro for barter, but nevertheless gain most of their living directly from hunting and agriculture.

Both forms of development are met with in the two pottery islands of New Guinea, Bilibi and Chas. The manufacture is in both places in the hands of the women. The natives of the islands round about, and even of the more distant ones, come to Chas to barter their products for the earthenware; in Bilibi the men take whole boatloads to sell along the coast. Every woman makes a special mark on the pottery she produces; but whether with one European observer we are to regard this as a trade-mark seems very doubtful.

In order to leave untouched no important part of the economic life of primitive peoples, let us take a rapid glance at their *commercial contrivances* and *public administration.* Both are intimately connected. For commerce is essentially a public matter; there are no private commercial arrangements whatever among these peoples. Indeed one can claim frankly that at this stage trade scarcely displays an economic character at all.

In the first place as concerns commercial *routes,* there are overland trade routes only when they have been tramped by the foot of man; the only artificial structures to facilitate land trade are primitive bridges, often consisting merely of a single tree-trunk, or ferries at river fords, for the use of which the traveller has to pay a tax to the village chief. These dues as a rule open the door to heavy extortions. On the other hand the natural *waterways* are everywhere diligently used, and there is hardly a primitive people that has not been led through its situation by the sea or on a river to the use of some peculiar kind of craft. The enumeration and description of these means of transportation would fill a volume; from the dugout and skin canoe of the Indians to the artistically carved rowboats and sailboats of the South Sea Islanders, all types are represented. On the whole, however, the technique of boat-building and

navigation has remained undeveloped among these peoples; none of their vessels deserve the name of ship in the proper sense. Thus their importance is everywhere restricted to *personal transportation* and *fishing*, while nowhere has the development reached a *freight transportation* of any extent.

Curiously among primitive peoples that branch of commercial communication has enjoyed the fullest development which we would naturally associate only with the highest culture, namely, the *communication of news*. It forms indeed the sole kind of trade for which primitive peoples have created permanent organizations. We refer to the courier service and the contrivances for sending verbal messages.

The despatching of *couriers* and *embassies* to neighbouring tribes in war and peace leads, even at a very low stage of culture, to the development of a complete system of symbolic signs and means of conveying intelligence. Thus among the rude tribes in the interior of Australia various kinds of body-painting, of headdress and other conventional signs serve to apprise a neighbouring tribe of the occurrence of a death, of the holding of a feast, and of a threatening danger, or to summon the tribesmen together for any purpose. Among the aborigines of South America ingeniously knotted cords or leather strips (*quippus*), and among the North Americans the well-known wampum perform similar offices; in Africa courier-staffs with or without engraved signs are customary, and the same are found among the Malays and Polynesians. If need be, the couriers have to learn their message by heart and communicate it verbally. In the negro kingdoms, where the administrative power of the ruler reaches only as far as he is able personally to intervene, the couriers of the chiefs hold a very important position; for through them the sovereign chief is as if omnipresent, and new occurrences come to his knowledge with surprising rapidity. But even for the communication of intelligence among members of the same tribe—for instance, in hunting and in war—a system of symbols exists which is often very ingeniously conceived, and which, as a rule, is hidden from the uninitiated.

Not less remarkable are the *telephonic contrivances* resting upon the ingenious employment of the *drum*, the musical instru-

ment in widest use among primitive peoples. In one sense they take the form of a developed signal-system, as among the East Indians and the Melanesians, in another there is a real speaking of words by which detailed conversations can be carried on at great distances. The latter is very common in Africa. As a rule only the chiefs and their relations are acquainted with this drum language; and the possession of the instrument used for this purpose is a mark of rank, like the crown and sceptre in civilized countries. Less extended is the employment of *fire-signs* for summoning the tribe or communicating news.

There is no *public economy,* in our sense of the word. True, where their power is to some extent established, the chiefs receive all kinds of dues in the form of shares, traditionally fixed, in the products of the chase and of husbandry, fees for the use of bridges, ferries, market-place. In more extensive kingdoms the subordinate chieftains are bound to send tribute. But all this is more or less manifestly clothed in the form of gift, for which the chief has to bestow a return present even if this consist only in the entertainment that he bestows upon the bearer. Even with the market-fees, which are payable by the sellers to the owner of the market-place, in the Congo district a return service is rendered in that the chief performs a dance in front, and to the delight, of those using the market. Of special interest to us are the presents that travellers *en route* have to pay to the village chiefs whose territories they traverse, since from such payments our *customs duty* has sprung. Not less important is it to notice that in the larger kingdoms the tribute of the subject tribes consists of those products which are peculiar to each tribe, and which are usually marketed by it. In the Lunda country, for instance, some districts bring ivory or skins, others salt or copper; from the northern parts come plaited goods of straw, and from the subordinate chiefs nearer the coast at times even powder and European cotton stuffs. Not infrequently has this led such sovereign chiefs to carry on a trade in these products, which accumulate in large quantities in their hands, or to claim a monopoly in them. The saying that makes the kings the greatest merchants thus gains a deeper significance.

In general the financial prerogatives of the chiefs are limited

only by their natural strength; and the wealth of the subject is without the protection that the civilized State assures to it by law. The expeditions sent out by the negro kings to collect the tribute and taxes degenerate only too often into robber raids. The claim of the kings to fines frequently reduces the administration of justice to an institution for extortion, and the system of gifts, which prevails in all relationships of a public character, too rapidly passes into a veritable system of bribery.

This must naturally react injuriously upon private industry. In the condition of constant feud in which the smaller tribes live with their neighbours under the arbitrary rule which in the interior usually accompanies the formation of larger states, most primitive peoples stand in peril of life and property. Through long habit this danger becomes endurable, yet economic advancement must assuredly be retarded by it. The obligation to make presents ever and everywhere, the custom of regarding food almost as free goods, leave but insufficient room for self-interest. An English writer makes the remark—from the standpoint of European life certainly not inaccurate—that this sharing-up rendered necessary by custom, encourages the people in gluttony, since only that is safe which they have succeeded in stuffing into their bellies; it also prevents rational provision for the future, because it is difficult to keep on hand supplies of any kind. Assuredly with some reason have the begging proclivities and the "tendency to steal," which is said to animate many primitive peoples in dealing with Europeans, been associated with the custom of gifts and the insufficient distinction of "mine and thine." The immoderate use of alcoholic drinks is likewise a consequence of their slight forethought for their own welfare. If, however, the attempt is made to appreciate all these things apart from the conditions of culture in which they arise, one readily recognises that they lie "beyond the bounds of good and evil," and that what appears from the standpoint of the modern Englishman as vice has concealed within it the beautiful virtues of disinterestedness, benevolence, and generosity.

For many who to-day pose as the bearers of civilization to their black and brown fellow men primitive man is the quintessence of all economic vices: lazy, disorderly, careless, prodigal,

untrustworthy, avaricious, thievish, heartless, and self-indulgent. It is true that primitive man lives only for the present, that he shuns all regular work, that he has not the conception of duty, nor of a vocation as a moral function in life. But it is not less true that with his wretched implements he accomplishes an amount of work that must excite our admiration, whether we contemplate with our own eyes the neat fruit-fields of the women or view in our museums the weapons and implements of the men, the products of infinite toil. Above all, his manner of working assures to primitive man a measure of enjoyment in life and a perpetual cheerfulness which the European, worried with work and oppressed with care, must envy him.

If since their acquaintance with European civilization so many primitive peoples have retrograded and some even become extinct, the cause lies, according to the view of those best acquainted with the matter, chiefly in the disturbing influence which our industrial methods and technique have exerted upon them. We carried into their childlike existence the nervous unrest of our commercial life, the hurried hunt for gain, our destructive pleasures, our religious wrangles and animosities. Our perfected implements relieved them suddenly of an immense burden of labour. What they had accomplished with their stone hatchets in months they performed with the iron one in a few hours; and a few muskets replaced in effectiveness hundreds of bows and arrows. Therewith fell away the beneficent tension in which the old method of work had continuously kept the body and mind of primitive man, particularly as the character of his needs remained at the same low level. Under these conditions has he gone to ruin, just as the plant that thrives in the shade withers away when exposed to the glare of the noon-day sun.—Carl Bücher, *Industrial Evolution*, 59–82 [whole paper, 41–82]. Copyright 1901 by Henry Holt & Co.

In connection with the whole question of the relation of geographical environment to culture, I feel that in one sense this relation can hardly be exaggerated, while in another sense it may be greatly overdone. Mason's paper on technogeography brings out the absolute dependence of man on nature. He may be more or less cunning in finding out what he can get out of nature, but he can secure nothing which she does not afford. On this score we need not hesitate, and we can also have no doubt that in certain regions nature affords more than in others. But after all culture is more fundamentally connected with the operations of the human mind than with the aspects of nature. Nature may affect the rate and particular form of progress and limit its degree, but human society takes the same general pattern everywhere. Every people has its laws, its commandments, its religion and superstition, its marriage, its art, its property, etc. The paper on the Yakuts shows the effect of a very cold climate on social life, but we are struck even more by the resemblance of the life of the Yakuts to that of central Europe than by its difference. Their practices are harder, because life is harder, but they are not harder than the practices of the central European peasant, and in many points strikingly resemble them.

It is plain also that the force of climate and geography is greater in the lower stages of culture and that ideas play an increasing rôle. The peculiar cultures of Japan, China, and India were the results of psychic

rather than geographic factors in the first place, and the transformation they are now undergoing is again one of ideas.

The paper of Bücher on the economic life of primitive man ought to give us a different idea of the laziness of the savage. In certain respects he was a very energetic person, and this will appear in more detail in the later section treating of his inventions. Certainly he, like ourselves, shunned unstimulating activities as far as possible, and substituted animals, slaves, women, and mechanical forces to do routine work, but his real backwardness lay, as it still lies, mainly in lack of numbers, permanence, security, and accumulated materials and ideas. Among ourselves, as the result of an artificial relation to the sources of food, long habits of specialization, and a fierce competition growing out of pressure of numbers we have developed steady habits of work and a very fast pace. But this is merely a social habit on our part, and not a natural disposition.

As a working hypothesis, at least, we may assume that prehistoric man was of essentially the same nature and mind as man at present and that this is true also of the savage. Before men are able to live in large numbers the characteristic works of civilization are not possible, and large numbers are not possible until man has worked out a very particular relation to the food supply. Lewis Morgan has justly remarked, in his *Ancient Society*, that man was at the threshold of civilization when he had made a union of the animal, vegetable, and mineral worlds—had harnessed the horse or the ox to the iron plow for the purpose of cultivating the cereals. At that point the food supply was controlled to such a degree that men were not only able to

live in large groups, but had that surplus we call capital which enabled them to disengage their attention from the satisfaction of immediate appetite. When a man has "only one meal between himself and starvation" he may indeed be inventive—and primitive man was pre-eminently that—but he cannot interpose all those intermediate steps, those long calculations, those elaborate constructions, and specialized aims and habits which characterize civilization.

The foregoing materials also enable us to appreciate the fact that the first steps in human progress must have been almost incredibly slow. If white society were stripped by some disaster of absolutely everything but life, it would be able to reconstruct its civilization rapidly, because it would retain the pattern of everything in its memory. But primitive society began without these ideas and memories. Without fire or metals, domestic animals or plants, with no artificial means of travel and communication, with no general conception of change, and no outlook except the immediate satisfaction of appetite, man must have drawn away from the brute world very slowly. Totemism and savage man's reverence for animal life have excited a great deal of wonder and speculation. But it is not strange that he should have felt so. Man had a peculiar power of mental calculation which the animals did not possess, but in their fighting equipment, strength, poisons, swiftness, and peculiar senses and instincts, he felt that they outclassed him. His superiority was acquired slowly and was long in doubt.

Nor is it surprising that different groups of men progressed in different ratios, because of difference in opportunity afforded by the geographical environment,

and the varying nature of crisis and reaccommodation. And in this connection we should once for all discard the habit of thinking of the lower races *en bloc*. There is as much difference between the North American Indian and the Australian as between the Indian and the white man. Between the Australian or the Wood Veddah of Ceylon and the ancient Greek or the modern German, it would be possible to make a rough but continuous classification of culture on the principle of more or less complete control of environment.

1 Barrows, D. P. *The Ethno-Botany of the Coahuilla Indians of Southern California.* Chicago, 1900.

2 Barrett, S. A. "The Ethno-Geography of the Pomo and Neighboring Indians," *Univ. of Cal. Ethn. and Anth. Sur.,* 7:1–332.

3 Bertran, A. "Les premières migrations vers la Gaule à l'époque historique et les premières grandes voies de commerce," *Rev. d'ethnog.,* 2:402–25.

4 Bordeau, L. "The Beginnings of Agriculture," *Pop. Sci. Monthly,* 46:678–88.

5 Bordier, A. *Géographie médicale.* Paris, 1884.

6 Bordier, A. "Le milieu intérieur et l'acclimatation," *Rev. mensuelle de l'école d'anth.,* 1:129–42.

7 Bos, P. R. "Jagd, Viehzucht und Ackerbau als Culturstufen," *Internationales Archiv für Ethnog.,* 10:187–205.

8 Brigham, A. P. *Geographic Influences in American History.* Boston, 1903.

*9 Bücher, C. *Industrial Evolution,* "Primitive Economic Conditions," 1–40.

10 Buckland, A. W. "On Traces of Commerce in Prehistoric Times," *Jour. Anth. Inst.,* 14:3–12.

11 Buckland, A. W. "Primitive Agriculture," *Jour. Anth. Inst.,* 7:2–19.

12 Capitan, L. "Le milieu extérieur," *Rev. mensuelle de l'école d'anth.,* 5:293–308.

13 Closson, C. C. "A Critic of Anthropo-Sociology," *Jour. Pol. Econ.,* 8:397–410.

14 Closson, C. C. "Dissociation by Displacement: A Phase of Social Selection," *Quar. Jour. Econ.,* 10:156–86; *Revue internat. de sociologie,* 4:497–537.

15 Closson, C. C. "Ethnic Stratification and Displacement," *Quar. Jour. Econ.,* 11:92–104.

16 Closson, C. C. "Further Data of Anthropo-Sociology," *Jour. Pol. Econ.,* 7:238–52.

17 Closson, C. C. "The Hierarchy of European Races," *Am. Jour. of Sociology,* 3:314–27; *Revue internat. de sociologie,* 6:416–30.

18 Closson, C. C. "The Races of Europe," *Jour. Pol Econ.*, 8:58–88.

*19 Craig, W. "North Dakota Life: Plant, Animal, and Human," *Bull. Am. Geog. Soc.*, 40:321–32; 402–15.

20 Crawfurd, J. "On the Relation of the Domesticated Animals to Civilization," *Trans. Ethn. Soc.*, N. S., 2:387–468.

21 Crawfurd, J. "On the Conditions Which Favour, Retard, or Obstruct the Early Civilization of Man," *Trans. Ethn. Soc.*, N. S., 1: 154–77.

22 Cruikshank, E. "Early Traders and Trade-Routes in Ontario and the West," *Am. Antiquarian*, 15:327–47.

23 *Dictionnaire nouveau de géographie universelle.* Paris, 1879–1895.

*24 Dorsey, J. O. "Omaha Sociology" [Industries], *Bur. of Am. Eth., Rep.*, 3:283–311.

25 Driesmans, H. *Rasse und Milieu.* Berlin, 1902.

26 Eichmann, J. R. "Die Entstehung der Ackerbaukultur," *Pol.-Anth. Rev.*, 9:481–84.

27 Felkin, R. W. "On the Geographical Distribution of Tropical Diseases in Africa," *Proc. Roy. Phys. Soc. of Edinburgh*, 12:415–89.

*28 Ferree, B. "Climatic Influences in Primitive Architecture," *Am. Anth.*, 3:147–58.

29 Flahault, C. "L'influence de l'homme sur la terre," *La géographie*, 5:305–7.

30 Fortescue, J. W. "The Influence of Climate on Race," *Nineteenth Century*, 33:862–73.

31 Friederici, G. "Der Indianerhund von Nordamerika," *Globus*, 76:361–65.

32 Frobenius, L. *Geographische Kulturkunde.* Leipzig, 1904.

33 Galton, F. "The First Steps toward the Domestication of Animals," *Trans. Ethn. Soc.*, N. S., 3:122–38.

34 Garnier, C., et Ammann, A. *L'histoire de l'habitation humaine.* Paris, 1892.

*35 Gerland, G. *Atlas der Völkerkunde.* Gotha, 1892.
[Maps locating all savage tribes. Indispensable.]

*36 Grierson, P. J. H. *The Silent Trade: A Contribution to the Early History of Human Intercourse.* Edinburgh, 1903.

37 Grunzel, J. "Die Landwirtschaft in China," *Globus*, 54:161–65.

*38 Haddon, A. C. *Cambridge Anth. Expedition to Torres Straits: Reports*, "Trade," 5:293–97; 6:185–88.

39 HAHN, E. *Die Hausthiere und ihre Beziehungen zur Wissenschaft des Menschens.* Leipzig, 1896.

40 HAHN, E. "Die primitive Landwirtschaft," *Zeits. für Socialwissenschaft,* 9:73–88; 172–88; 241–51; 309–25.

41 HAHN, E. "Zur Theorie der Entstehung des Ackerbaues," *Globus,* 75:281–87.

*42 HEHN, V. *Culturpflanzen und Hausthiere.* Berlin, 1902.

[An early edition is translated entitled *Cultivated Plants and Domestic Animals.* London, 1891.]

*43 HERBERTSON, A. J. AND F. D. *Man and His Work.* London, 1899.

44 HODGE, F. W. "Prehistoric Irrigation in Arizona," *Am. Anth.,* 6: 323–30.

*45 HOUGH, W. "Environmental Interrelations in Arizona," *Am. Anth.,* 11:133–55.

*46 HOUGH, W. "The Hopi in Relation to Their Plant Environment," *Am. Anth.,* 10:33–44.

*47 HOUGH, W. "Pueblo Environment," *Am. Assoc. for Adv. of Sci., Proc.,* 55:447–54.

48 IRELAND, A. *Tropical Colonisation.* New York, 1899.

*49 JENKS, A. E. "The Wild-Rice Gatherers of the Upper Lakes: a Study in American Primitive Economics," *Bur. of Am. Ethn., Rep.,* 19:1013–1137.

50 JOHNSTON, SIR H. *George Grenfell and the Congo,* "Hunting, Warfare, Navigation," 2:762–88.

51 JOHNSTON, SIR H. *George Grenfell and the Congo,* "Native Diseases," 2: 547–57.

52 JOHNSTON, SIR H. *George Grenfell and the Congo,* "Trade and Currency," 2:789–97.

53 JORET, C. *Les plantes dans l'antiquité et au moyen âge.* Paris, 1897–.

54 KRÄMER, H. *Der Mensch und die Erde.* Berlin, 1906.

55 LANGKAVEL, B. "Hunde und Naturvölker," *Internationales Archiv für Ethnog.,* 8:109–17, 138–49.

*56 LAPOUGE, G. V. DE. "The Fundamental Laws of Anthropo-Sociology" (tr. by C. C. Closson), *Jour. Pol. Econ.,* 6:54–92.

57 LASCH, R. "Die Landwirtschaft der Naturvölker," *Zeits. für Socialwissenschaft,* 7:25–47, 97–115, 190–97, 248–64.

*58 Lasch, R. "Das Marktwesen auf primitiven Kulturstufen," *Zeits. für Socialwissenschaft*, 9:619–27, 700–15.

*59 Lazarus, M. "Geographie und Psychologie," *Zeits. für Völkerpsychologie und Sprachwissenschaft*, 1:212–21.

60 Letourneau, C. "L'âge précommercial," *Bul. de la Soc. d'Anth. de Paris*, 4 Séries, 8:152–59.

61 Letourneau, C. "Le commerce primitif," *Bul. de la Soc. d'Anth. de Paris*, 4 Séries, 7:204–9.

62 Letourneau, C. *L'évolution du commerce dans les diverses races humaines.* Paris, 1897.

63 Letourneau, C. "Le passé et l'avenir du commerce," *Rev. mensuelle de l'école d'anth.*, 5:229–47.

*64 Lippert, J. *Kulturgeschichte der Menschheit*, "Die Nahrungspflanzen im Gefolge der Kultur," 1:572–618.

*65 Lippert, J. *Kulturgeschichte der Menschheit*, "Das Nomadentum und die Verbreitung der Zuchttiere," 1:478–571.

*66 Lippert, J. *Kulturgeschichte der Menschheit*, "Der beginnende Anbau und die Verbreitung der jüngeren Völker in Europa," 1:445–77.

*67 McGee, W. J. *The Earth the Home of Man.* Washington, 1894.

68 McGee, W. J. "The Relation of Institutions to Environment," *Smiths. Inst., Ann. Rep.* for 1895:701–11.

*69 Mason, O. T. "Aboriginal American Zoötechny," *Am. Anth.*, 12:45–81.

*70 Mason, O. T. "Primitive Travel and Transportation," *U. S. Nat. Mus., Ann. Rep.* for 1894:239–93.

*71 Mason, O. T. "Influence of Environment upon Human Industries or Arts," *Smiths. Inst., Ann. Rep.* for 1896:639–65.

*72 Mason, O. T. "Migration and the Food Quest; a Study in the Peopling of America," *Smiths. Inst., Ann. Rep.* for 1894:523–39; *Am. Anth.*, 7:275–92.

73 Mindeleff, C. "The Influence of Geographical Environment," *Am. Geog. Soc. Jour.*, 29:1–12.

74 Mortillet, G. de. *Origines de la chasse, de la pêche de l'agriculture.* Paris, 1890.

75 Mücke, J. R. *Urgeschichte des Ackerbaues und der Viehzucht.* Greifswald, 1898.

*76 Payne, E. J. *History of the New World* [Aboriginal food conditions, Agriculture, and Religion], 1:303–605.

77 PENCK, "Klima, Boden und Mensch," *Jahrb. f. Gesetzgebung*, 31: 577–90.

78 PENKA, KARL. "Der Mensch und das Klima," *Das Ausland*, 64: 411–13.

*79 PESCHEL, O. *The Races of Man*, "The Influence of Commerce on the Local Distribution of Nations," 209–18.

80 PETRIE, W. M. FLINDERS. "Migrations," *Jour. Anth. Inst.*, 36: 189–232.

81 RATZEL, F. *Anthropo-geographie*. Stuttgart, 1891–99. 2 vols.
[See Semple, E. C., in this list.]

82 RATZEL, F. "Die geographische Methode in der Ethnographie," *Geographische Zeits.*, 3: 268–78.

*83 RATZEL, F. "Situation, Aspect, and Numbers of the Human Race," *The History of Mankind*, 1: 5–14.

*84 RAU, C. "Prehistoric Fishing in Europe and North America," *Smithsonian Contributions to Knowledge*, 25: 1–342.

*85 RECLUS, E. *The Earth and Its Inhabitants*. New York, 1886–95. 19 vols.

86 REGNAULT, F. "Du rôle des montagnes dans la distribution des races," *Bull. de la Soc. d'Anth. de Paris*, 4 Séries, 3: 221–34.

87 RIDGEWAY, W. "The Greek Trade Routes to Britain," *Folk-Lore*, 1: 82–107.

*89 RIPLEY, W. F. *The Races of Europe*. New York, 1899.
[The best work on the racial geography of Europe.]

*90 RIPLEY, W. F. "Geography as a Sociological Study," *Pol. Sci. Quar.*, 10: 636–55.

*91 ROTH, W. E. "Food: Its Search, Capture, and Preparation," *North Queensland Eth. Bul.*, No. 33. Brisbane, 1901.

92 SCHRADER, F. "Exchanges d'activité entre la terre et l'homme," *Rev. mensuelle de l'école d'anth.*, 6: 33–42.

93 SCHRADER, F. "De l'influence des formes terrestres sur le développement humain," *Rev. mensuelle de l'école d'anth.*, 3: 205–19.

*94 SEMPLE, ELLEN C. *American History and its Geographical Conditions*. Boston, 1903.

*95 SEMPLE, ELLEN C. *The Influences of Geographic Environment: On the Basis of Ratzel's System of Anthropo-geography*. Boston [in press].

[This may be regarded as superseding Ratzel's great work on *Anthropo-geographie*. Contents: 1, The Operation of Geographic Factors in History; 2, Classes of Geographic Influences; 3, Society and State in Re-

lation to the Soil; 4, The Movements of Peoples in Their Geographical Significance; 5, The Importance of Geographical Location; 6, Geographical Area; 7, Geographical Boundaries; 8, Coast Peoples; 9, Man's Relation to the Water; 10, Oceans and Enclosed Seas; 11, The Anthropo-geography of Rivers; 12, Continents and Peninsulas; 13, Island Peoples; 14, Lowlands and Highlands; 15, Mountain Peoples; 16, The Environent of Deserts and Steppes; 17, Animal and Plant Life as a Factor in Man's Development; 18, The Influence of Climate.]

*96 SKEAT AND BLAGDEN. *Pagan Races of the Malay Peninsula,* "Cultivation," 1:338–73.

*97 SKEAT AND BLAGDEN. *Pagan Races of the Malay Peninsula,* "Food—Stimulants—Narcotics," 1:109–36.

*98 SKEAT AND BLAGDEN. *Pagan Races of the Malay Peninsula,* "Hunting, Trapping, and Fishing," 1:200–24.

*99 SKEAT AND BLAGDEN. *Pagan Races of the Malay Peninsula,* "Modes of Barter," 1:225–41.

*100 SPENCER, H. *Principles of Sociology,* "Original External Factors," 1:16–37.

101 SPENCER, H. *Descriptive Sociology,* 1:49–58; 2:53–65; 3:47–55; 4:36–42; 5:45–52; 6:43–49; 7:95–112; 8:133–44.

102 STICKNEY, GARDNER P. "Indian Use of Wild Rice," *Am. Anth.,* 9:115–21.

103 THRUPP, J. "On the Domestication of Certain Animals in England between the Seventh and Eleventh Centuries," *Trans. Ethn. Soc.,* N. S., 4:164–72.

104 ULE, O. "Ueber den Einfluss der Oberflachengestaltung der Länder und der Meere und Ströme auf die Entwickelung der Völker," *Die Natur,* 25:265–67, 277–79.

*105 VIERKANDT, A. "Die Kulturformen und ihre geographische Bedeutung," *Geographische Zeits.,* 3:256–67.

*106 VIERKANDT, A. "Die wirtschaftlichen Verhältnisse der Naturvölker," *Zeits. für Socialwissenschaft,* 2:81–97, 175–85.

*107 VIRCHOW, R. "Acclimatisation," *Zeits. f. Ethn.,* 17:202–14.

108 VOIT, C. "Ueber die Nahrung in verschiedenen Klimaten," *Archiv für Anth.,* 23:467–83.

109 WAITZ, T. *Anthropologie der Naturvölker* [Climate, Food], 1:38–73. [In the transl. by Collingwood (*Introduction to Anthropology*), 34–67.]

*110 WARMING, E., AND VAHL, M. *Oecology of Plants.* Oxford, 1909. [Translated from the Swedish. The classical work on plant sociology.]

111 WEISSMAN, A. *The Effect of External Influences upon Development.* London, 1894.

112 WOODRUFF, C. E. *The Effects of Tropical Light on White Men.* New York, London, 1905.

PART II

MENTAL LIFE AND EDUCATION

MENTAL LIFE AND EDUCATION

THE MIND OF PRIMITIVE MAN

One of the chief aims of anthropology is the study of the mind of man under the varying conditions of race and of environment. The activities of the mind manifest themselves in thoughts and actions, and exhibit an infinite variety of form among the peoples of the world. In order to understand these clearly, the student must endeavor to divest himself entirely of opinions and emotions based upon the peculiar social environment into which he is born. He must adapt his own mind, so far as feasible, to that of the people whom he is studying. The more successful he is in freeing himself from the bias based on the group of ideas that constitute the civilization in which he lives, the more successful he will be in interpreting the beliefs and actions of man. He must follow lines of thought that are new to him. He must participate in new emotions, and understand how, under unwonted conditions, both lead to actions. Beliefs, customs, and the response of the individual to the events of daily life give us ample opportunity to observe the manifestations of the mind of man under varying conditions.

The thoughts and actions of civilized man and those found in more primitive forms of society prove that, in various groups of mankind, the mind responds quite differently when exposed to the same conditions. Lack of logical connection in its conclusions, lack of control of will, are apparently two of its fundamental characteristics in primitive society. In the formation of opinions, belief takes the place of logical demonstration. The emotional value of opinions is great, and consequently they quickly lead to action. The will appears unbalanced, there being a readiness to yield to strong emotions, and a stubborn resistance in trifling matters. In the following remarks I propose to analyze the differences which characterize the mental life of man in various stages of culture.

There are two possible explanations of the different manifestations of the mind of man. It may be that the minds of dif-

ferent races show differences of organization; that is to say, the laws of mental activity may not be the same for all minds. But it may also be that the organization of mind is practically identical among all races of man; that mental activity follows the same laws everywhere, but that its manifestations depend upon the character of individual experience that is subjected to the action of these laws.

It is quite evident that the activities of the human mind depend upon these two elements. The organization of the mind may be defined as the group of laws which determine the modes of thought and of action, irrespective of the subject-matter of mental activity. Subject to such laws are the manner of discrimination between perceptions, the manner in which perceptions associate themselves with previous perceptions, the manner in which a stimulus leads to action, and the emotions produced by stimuli. These laws determine to a great extent the manifestations of the mind.

But, on the other hand, the influence of individual experience can easily be shown to be very great. The bulk of the experience of man is gained from oft-repeated impressions. It is one of the fundamental laws of psychology that the repetition of mental processes increases the facility with which these processes are performed, and decreases the degree of consciousness that accompanies them. This law expresses the well-known phenomena of habit. When a certain perception is frequently associated with another previous perception, the one will habitually call forth the other. When a certain stimulus frequently results in a certain action, it will tend to call forth habitually the same action. If a stimulus has often produced a certain emotion, it will tend to reproduce it every time.

The explanation of the activity of the mind of man, therefore, requires the discussion of two distinct problems. The first bears upon the question of unity or diversity of organization of the mind, while the second bears upon the diversity produced by the variety of contents of the mind as found in the various social and geographical environments. The task of the investigator consists largely in separating these two causes and in attributing to each its proper share in the development of the pe-

culiarities of the mind. It is the latter problem, principally, which is of interest to the folk-lorist. When we define as folk-lore the total mass of traditional matter present in the mind of a given people at any given time, we recognize that this matter must influence the opinions and activities of the people more or less according to its quantitative and qualitative value, and also that the actions of each individual must be influenced to a greater or less extent by the mass of traditional material present in his mind.

We will first devote our attention to the question, Do differences exist in the organization of the human mind? Since Waitz's thorough discussion of the question of the unity of the human species, there can be no doubt that in the main the mental characteristics of man are the same all over the world; but the question remains open, whether there is a sufficient difference in grade to allow us to assume that the present races of man may be considered as standing on different stages of the evolutionary series, whether we are justified in ascribing to civilized man a higher place in organization than to primitive man. In answering this question, we must clearly distinguish between the influences of civilization and of race. A number of anatomical facts point to the conclusion that the races of Africa, Australia, and Melanesia are to a certain extent inferior to the races of Asia, America, and Europe. We find that on the average the size of the brain of the negroid races is less than the size of the brain of the other races; and the difference in favor of the mongoloid and white races is so great that we are justified in assuming a certain correlation between their mental ability and the increased size of their brain. At the same time it must be borne in mind that the variability of the mongoloid and white races on the one hand, and of the negroid races on the other, is so great that only a small number, comparatively speaking, of individuals belonging to the latter have brains smaller than any brains found among the former; and that, on the other hand, only a few individuals of the mongoloid races have brains so large that they would not occur at all among the black races. That is to say, the bulk of the two groups of races have brains of the same capacities but individuals with heavy brains are proportionately more frequent

among the mongoloid and white races than among the negroid races. Probably this difference in the size of the brain is accompanied by differences in structure, although no satisfactory information on this point is available. On the other hand, if we compare civilized people of any race with uncivilized people of the same race, we do not find any anatomical differences which would justify us in assuming any fundamental differences in mental constitution.

When we consider the same question from a purely psychological point of view, we recognize that one of the most fundamental traits which distinguish the human mind from the animal mind is common to all races of man. It is doubtful if any animal is able to form an abstract conception such as that of number, or any conception of the abstract relations of phenomena. We find that this is done by all races of man. A developed language with grammatical categories presupposes the ability of expressing abstract relations, and, since every known language has grammatical structure, we must assume that the faculty of forming abstract ideas is a common property of man. It has often been pointed out that the concept of number is developed very differently among different peoples. While in most languages we find numeral systems based upon the 10, we find that certain tribes in Brazil, and others in Australia, have numeral systems based on the 3, or even on the 2, which involve the impossibility of expressing high numbers. Although these numeral systems are very slightly developed as compared with our own, we must not forget that the abstract idea of number must be present among these people, because, without it, no method of counting is possible. It may be worth while to mention one or two other facts taken from the grammars of primitive people, which will make it clear that all grammar presupposes abstractions. The three personal pronouns—I, thou, and he—occur in all human languages. The underlying idea of these pronouns is the clear distinction between the self as speaker, the person or object spoken to, and that spoken of. We also find that nouns are classified in a great many ways in different languages. While all the older Indo-European languages classify nouns according to sex, other languages classify nouns as animate or inanimate,

or as human and not human, etc. Activities are also classified in many different ways. It is at once clear that every classification of this kind involves the formation of an abstract idea. The processes of abstraction are the same in all languages; and they do not need any further discussion, except in so far as we may be inclined to value differently the systems of classification and the results of abstraction.

The question whether the power to inhibit impulses is the same in all races of man is not so easily answered. It is an impression obtained by many travellers, and also based upon experiences gained in our own country, that primitive man and the less educated have in common a lack of control of emotions, and they give way more readily to an impulse than civilized man and the highly educated. I believe that this conception is based largely upon the neglect to consider the occasions on which a strong control of impulses is demanded in various forms of society. What I mean will become clear when I call your attention to the often described power of endurance exhibited by Indian captives who undergo torture at the hands of their enemies. When we want to gain a true estimate of the power of primitive man to control impulses, we must not compare the control required on certain occasions among ourselves with the control exerted by primitive man on the same occasions. If, for instance, our social etiquette forbids the expression of feelings of personal discomfort and of anxiety, we must remember that personal etiquette among primitive men may not require any inhibition of the same kind. We must rather look for those occasions on which inhibition is required by the customs of primitive man. Such are, for instance, the numerous cases of taboo, that is, of prohibitions of the use of certain foods, or of the performance of certain kinds of work, which sometimes require a considerable amount of self-control. When an Eskimo community is on the point of starvation, and their religious proscriptions forbid them to make use of the seals that are basking on the ice, the amount of self-control of the whole community, which restrains them from killing these seals, is certainly very great. Cases of this kind are very numerous, and prove that primitive man has the ability to control his impulses, but that this control is exerted on occasions which de-

pend upon the character of the social life of the people, and which do not coincide with the occasions on which we expect and require control of impulses.

The third point in which the mind of primitive man seems to differ from that of civilized man is in its power of choosing between perceptions and actions according to their value. On this power rests the whole domain of art and of ethics. An object or an action becomes of artistic value only when it is chosen from among other perceptions or other actions on account of its beauty. An action becomes moral only when it is chosen from among other possible actions on account of its ethical value. No matter how crude the standards of primitive man may be in regard to these two points, we recognize that all of them possess an art, and that all of them possess ethical standards. It may be that their art is quite contrary to our artistic feeling. It may be that their ethical standards outrage our moral code. We must clearly distinguish between the æsthetic and ethical codes and the existence of an æsthetic and ethical standard.

Our brief consideration of the phenomena of abstraction, of inhibition, and of choice, leads, then, to the conclusion that these functions of the human mind are common to the whole of humanity. It may be well to state here that, according to our present method of considering biological and psychological phenomena, we must assume that these functions of the human mind have developed from lower conditions existing at a previous time, and that at one time there certainly must have been races and tribes in which the properties here described were not at all, or only slightly, developed; but it is also true that among the present races of man, no matter how primitive they may be in comparison with ourselves, these faculties are highly developed.

It is not impossible that the degree of development of these functions may differ somewhat among different types of man; but I do not believe that we are able at the present time to form a just valuation of the power of abstraction, of control, and of choice among different races. A comparison of their languages, customs, and activities suggests that these faculties may be unequally developed; but the differences are not sufficient to justify

us in ascribing materially lower stages to some peoples, and higher stages to others. The conclusions reached from these considerations are, therefore, on the whole, negative. We are not inclined to consider the mental organization of different races of man as differing in fundamental points.

We next turn to a consideration of the second question propounded here, namely, to an investigation of the influence of the contents of the mind upon the formation of thoughts and actions. We will take these up in the same order in which we considered the previous question. We will first direct our attention to the phenomena of perception. It has been observed by many travellers that the senses of primitive man are remarkably well trained, and that he is an excellent observer. The adeptness of the experienced hunter, who finds the tracks of his game where the eye of a European would not see the faintest indication, is an instance of this kind. While the power of perception of primitive man is excellent, it would seem that his power of logical interpretation of perceptions is deficient. I think it can be shown that the reason for this fact is not founded on any fundamental peculiarity of the mind of primitive man, but lies, rather, in the character of the ideas with which the new perception associates itself. In our own community a mass of observations and of thoughts is transmitted to the child. These thoughts are the result of careful observation and speculation of our present and of past generations; but they are transmitted to most individuals as traditional matter, much the same as folk-lore. The child associates new perceptions with this whole mass of traditional material, and interprets his observations by its means. I believe it is a mistake to assume that the interpretation made by each civilized individual is a complete logical process. We associate a phenomenon with a number of known facts, the interpretations of which are assumed as known, and we are satisfied with the reduction of a new fact to these previously known facts. For instance, if the average individual hears of the explosion of a previously unknown chemical, he is satisfied to reason that certain materials are known to have the property of exploding under proper conditions, and that consequently the unknown substance has the same quality. On the whole, I do not think that we

should try to argue still further, and really try to give a full explanation of the causes of the explosion.

The difference in the mode of thought of primitive man and of civilized man seems to consist largely in the difference of character of the traditional material with which the new perception associates itself. The instruction given to the child of primitive man is not based on centuries of experimentation, but consists of the crude experience of generations. When a new experience enters the mind of primitive man, the same process which we observe among civilized men brings about an entirely different series of associations, and therefore results in a different type of explanation. A sudden explosion will associate itself in his mind, perhaps, with a tale which he has heard in regard to the mythical history of the world, and consequently will be accompanied by superstitious fear. When we recognize that, neither among civilized men nor among primitive men, the average individual carries to completion the attempt at causal explanation of phenomena, but carries it only so far as to amalgamate it with other previously known facts, we recognize that the result of the whole process depends entirely upon the character of the traditional material: herein lies the immense importance of folk-lore in determining the mode of thought. Herein lies particularly the enormous influence of current philosophic opinion upon the masses of the people, and herein lies the influence of the dominant scientific theory upon the character of scientific work.

It would be in vain to try to understand the development of modern science without an intelligent understanding of modern philosophy; it would be in vain to try to understand the history of mediæval science without an intelligent knowledge of mediæval theology; and so it is in vain to try to understand primitive science without an intelligent knowledge of primitive mythology. Mythology, theology, and philosophy are different terms for the same influences which shape the current of human thought, and which determine the character of the attempts of man to explain the phenomena of nature. To primitive man—who has been taught to consider the heavenly orbs as animate beings, who sees in every animal a being more powerful than

man, to whom the mountains, trees, and stones are endowed with life—explanations of phenomena will suggest themselves entirely different from those to which we are accustomed, since we base our conclusions upon the existence of matter and force as bringing about the observed results. If we do not consider it possible to explain the whole range of phenomena as the result of matter and force alone, all our explanations of natural phenomena must take a different aspect.

In scientific inquiries we should always be clear in our own minds of the fact that we do not carry the analysis of any given phenomenon to completion; but that we always embody a number of hypotheses and theories in our explanations. In fact, if we were to do so, progress would hardly become possible, because every phenomenon would require an endless amount of time for thorough treatment. We are only too apt, however, to forget entirely the general, and, for most of us, purely traditional, theoretical basis which is the foundation of our reasoning, and to assume that the result of our reasoning is absolute truth. In this we commit the same error that is committed, and has been committed, by all the less civilized peoples. They are more easily satisfied than we are at the present time, but they also assume as true the traditional element which enters into their explanations, and therefore accept as absolute truth the conclusions based on it. It is evident that, the fewer the number of traditional elements that enter into our reasoning, and the clearer we endeavor to be in regard to the hypothetical part of our reasoning, the more logical will be our conclusions. There is an undoubted tendency in the advance of civilization to eliminate traditional elements, and to gain a clearer and clearer insight into the hypothetical basis of our reasoning. It is therefore not surprising that, with the advance of civilization, reasoning becomes more and more logical, not because each individual carries out his thought in a more logical manner, but because the traditional material which is handed down to each individual has been thought out and worked out more thoroughly and more carefully. While in primitive civilization the traditional material is doubted and examined by only a very few individuals,

the number of thinkers who try to free themselves from the fetters of tradition increases as civilization advances.

The influence of traditional material upon the life of man is not restricted to his thoughts, but manifests itself no less in his activities. The comparison between civilized man and primitive man in this respect is even more instructive than in the preceding case. A comparison between the modes of life of different nations, and particularly of civilized man and of primitive man, makes it clear that an enormous number of our actions are determined entirely by traditional associations. When we consider, for instance, the whole range of our daily life, we notice how strictly we are dependent upon tradition that cannot be accounted for by any logical reasoning. We eat our three meals every day, and feel unhappy if we have to forego one of them. There is no physiological reason which demands three meals a day, and we find that many people are satisfied with two meals, while others enjoy four or even more. The range of animals and plants which we utilize for food is limited, and we have a decided aversion against eating dogs, or horses, or cats. There is certainly no objective reason for such aversion, since a great many people consider dogs and horses as dainties. When we consider fashions, the same becomes still more apparent. To appear in the fashions of our forefathers of two centuries ago would be entirely out of the question, and would expose one to ridicule. The same is true of table manners. To smack one's lips is considered decidedly bad style, and may even incite feelings of disgust; while among the Indians, for instance, it would be considered as in exceedingly bad taste not to smack one's lips when one is invited to dinner, because it would suggest that the guest does not enjoy his dinner. The whole range of actions that are considered as proper and improper cannot be explained by any logical reason, but are almost all entirely due to custom; that is to say, they are purely traditional. This is even true of customs which excite strong emotions, as, for instance, those produced by infractions of modesty.

While in the logical processes of the mind we find a decided tendency, with the development of civilization, to eliminate traditional elements, no such marked decrease in the force of

traditional elements can be found in our activities. These are almost as much controlled by custom among ourselves as they are among primitive man. It is easily seen why this should be the case. The mental processes which enter into the development of judgments are based largely upon associations with previous judgments. I pointed out before that this process of association is the same among primitive men as among civilized men, and that the difference consists largely in the modification of the traditional material with which our new perceptions amalgamate. In the case of activities, the conditions are somewhat different. Here tradition manifests itself in an action performed by the individual. The more frequently this action is repeated, the more firmly it will become established, and the less will be the conscious equivalent accompanying the action; so that customary actions which are of very frequent repetition become entirely unconscious. Hand in hand with this decrease of consciousness goes an increase in the emotional value of the omission of such activities, and still more of the performance of actions contrary to custom. A greater will power is required to inhibit an action which has become well established; and combined with this effort of the will power are feelings of intense displeasure.

This leads us to the third problem, which is closely associated with the difference between the manifestation of the power of civilized man and of primitive man to inhibit impulses. It is the question of choice as dependent upon value. It is evident from the preceding remarks that, on the whole, we value most highly what conforms to our previous actions. This does not imply that it must be identical with our previous actions, but it must be on the line of development of our previous actions. This is particularly true of ethical concepts. No action can find the approval of a people which is fundamentally opposed to its customs and traditions. Among ourselves it is considered proper and a matter of course to treat the old with respect, for children to look after the welfare of their aged parents; and not to do so would be considered base ingratitude. Among the Eskimo we find an entirely different standard. It is required of children to kill their parents when they have become so old as to be helpless and no longer of any use to the family or to the community.

It would be considered a breach of filial duty not to kill the aged parent. Revolting though this custom may seem to us, it is founded on the ethical law of the Eskimo, which rests on the whole mass of traditional lore and custom.

One of the best examples of this kind is found in the relation between individuals belonging to different tribes. There are a number of primitive hordes to whom every stranger not a member of the horde is an enemy, and where it is right to damage the enemy to the best of one's power and ability, and if possible to kill him. This custom is founded largely on the idea of the solidarity of the horde, and of the feeling that it is the duty of every member of the horde to destroy all possible enemies. Therefore every person not a member of the horde must be considered as belonging to a class entirely distinct from the members of the horde, and is treated accordingly. We can trace the gradual broadening of the feeling of fellowship during the advance of civilization. The feeling of fellowship in the horde expands to the feeling of unity of the tribe, to a recognition of bonds established by a neighborhood of habitat, and further on to the feeling of fellowship among members of nations. This seems to be the limit of the ethical concept of fellowship of man which we have reached at the present time. When we analyze the strong feeling of nationality which is so potent at the present time, we recognize that it consists largely in the idea of the preeminence of that community whose member we happen to be,—in the preëminent value of its language, of its customs, and of its traditions, and in the belief that it is right to preserve its peculiarities and to impose them upon the rest of the world. The feeling of nationality as here expressed, and the feeling of solidarity of the horde, are of the same order, although modified by the gradual expansion of the idea of fellowship; but the ethical point of view which makes it justifiable at the present time to increase the well-being of one nation at the cost of another, the tendency to value one's own civilization as higher than that of the whole race of mankind, are the same as those which prompt the actions of primitive man, who considers every stranger as an enemy, and who is not satisfied until the enemy is killed. It is somewhat difficult for us to recognize that the

value which we attribute to our own civilization is due to the fact that we participate in this civilization, and that it has been controlling all our actions since the time of our birth; but it is certainly conceivable that there may be other civilizations, based perhaps on different traditions and on a different equilibrium of emotion and reason, which are of no less value than ours, although it may be impossible for us to appreciate their values without having grown up under their influence. The general theory of valuation of human activities, as taught by anthropological research, teaches us a higher tolerance than the one which we now profess.

Our considerations make it probable that the wide differences between the manifestations of the human mind in various stages of culture may be due almost entirely to the form of individual experience, which is determined by the geographical and social environment of the individual. It would seem that, in different races, the organization of the mind is on the whole alike, and that the varieties of mind found in different races do not exceed, perhaps not even reach, the amount of normal individual variation in each race. It has been indicated that, notwithstanding this similarity in the form of individual mental processes, the expression of mental activity of a community tends to show a characteristic historical development. From a comparative study of these changes among the races of man is derived our theory of the general development of human culture. But the development of *culture* must not be confounded with the development of *mind*. Culture is an expression of the achievements of the mind, and shows the cumulative effects of the activities of many minds. But it is not an expression of the organization of the minds constituting the community, which may in no way differ from the minds of a community occupying a much more advanced stage of culture.—F. Boas, *Journal of American Folk-Lore*, 14: 1–11.

[THE MIND OF THE SAVAGE]

. . . . In approaching the question of the parity or disparity of mental ability in the white and the lower races, we bring to it a fixed and instinctive prejudice. No race views another race with that generosity with which it views itself. It may even

be said that the existence of a social group depends on its taking an exaggerated view of its own importance; and in a state of nature, at least, the same is true of the individual. If self-preservation is the first law of nature, there must be on the mental side an acute consciousness of self, and a habit of regarding the self as of more importance than the world at large. The value of this standpoint lies in the fact that while a wholesome fear of the enemy is important, a wholesome contempt is even more so. Praising one's self and dispraising an antagonist creates a confidence and a mental superiority in the way of confidence. The vituperative recriminations of modern prize-fighters, the boastings of the Homeric heroes, and the *bâgan* of the old Germans, like the backtalk of the small boy, were calculated to screw the courage up; and the Indians of America usually gave a dance before going on the war-path, in which by pantomime and boasting they magnified themselves and their past, and so stimulated their self-esteem that they felt invincible. In race-prejudice we see the same tendency to exalt the self and the group at the expense of outsiders. The alien group is belittled by attaching contempt to its peculiarities and habits—its color, speech, dress, and all the signs of its personality. This is not a laudable attitude, but it has been valuable to the group, because a bitter and contemptuous feeling is an aid to good fighting.

No race or nation has yet freed itself from this tendency to exalt and idealize itself. It is very difficult for a member of western civilization to understand that the orientals regard us with a contempt in comparison with which our contempt for them is feeble. Our bloodiness, our newness, our lack of reverence, our land-greed, our break-neck speed and lack of appreciation of leisure make Vandals of us. On the other hand, we are very stupid about recognizing the intelligence of orientals. We have been accustomed to think that there is a great gulf between ourselves and other races; and this persists in an undefinable way after scores of Japanese have taken high rank in our schools, and after Hindus have repeatedly been among the wranglers in mathematics at Cambridge. It is only when one of the far eastern nations has come bodily to the front that we begin to ask ourselves whether there is not an error in our reckoning.

The instinct to belittle outsiders is perhaps at the bottom of our delusion that the white race has one order of mind and the black and yellow races have another. But, while a prejudice—a matter of instinct and emotion—may well be at the beginning of an error of this kind, it could not sustain itself in the face of our logical habits unless reinforced by an error of judgment. And this error is found in the fact that in a naïve way we assume that our steps in progress from time to time are due to our mental superiority as a race over the other races (that is, to a superior brain structure) and to the mental superiority of one generation of ourselves over the preceding.

In this we are confusing advance in culture with brain improvement. If we should assume a certain grade of intelligence, fixed and invariable in all individuals, races, and times—an unwarranted assumption, of course—progress would still be possible, provided we assumed a characteristically human grade of intelligence to begin with. With associative memory, abstraction, and speech men are able to compare the present with the past, to deliberate and discuss, to invent, to abandon old processes for new, to focus attention on special problems, to encourage specialization, and to transmit to the younger generation a more intelligent standpoint and a more advanced starting-point. Culture is the accumulation of the results of activity, and culture could go on improving for a certain time even if there were a retrogression in intelligence. If all the chemists in class A should stop work tomorrow, the chemists in class B would still make discoveries. These would influence manufacture, and progress would result. If a worker in any specialty acquaints himself with the results of his predecessors and contemporaries and *works*, he will add some results to the sum of knowledge in his line. And if a race preserves by record or tradition the memory of what past generations have done, and adds a little, progress is secured whether the brain improves or stands still. In the same way, the fact that one race has advanced farther in culture than another does not necessarily imply a different order of brain, but may be due to the fact that in the one case social arrangements have not taken the shape affording the most favorable conditions for the operation of the mind.

If, then, we make due allowance for our instinctive tendency as a white group to disparage outsiders, and, on the other hand, for our tendency to confuse progress in culture and general intelligence with biological modification of the brain, we shall have to reduce very much our usual estimate of the difference in mental capacity between ourselves and the lower races, if we do not eliminate it altogether; and we shall perhaps have to abandon altogether the view that there has been an increase in the mental capacity of the white race since prehistoric times.

The first question arising in this connection is whether any of the characteristic faculties of the human mind—perception, memory, inhibition, abstraction—are absent or noticeably weak in the lower races. If this is found to be true, we have reason to attribute the superiority of the white race to biological causes; otherwise we shall have to seek an explanation of white superiority in causes lying outside the brain.

In examining this question we need not dwell on the acuteness of the sense-perceptions, because these are not distinctively human. As a matter of fact some of them are better developed in the animals than in man, and we usually allow that the savage has greater acuity of the senses than the white man. But this is probably an error in the other direction. Bruner has recently determined that the sense of hearing in the savage is actually duller than in the civilized. In his *Hearing of Primitive Peoples* he says: "Not only the intellectual but sensory possibilities are to be stated in terms of the variety of motor response of which the individual is capable. Other things being equal, those individuals or races possessing the greatest complexity and variety of reactions to elements in their respective environments likewise will be gifted with keener and more acute sensory mechanisms." And the superiority of the savage in tracking is not due to superior eyesight but to a skill in interpreting marks, similar to the facility we acquire in reading a badly printed or illegibly written page. On this score, at any rate, we cannot assume a difference between the savage and the civilized unless it is in those cases where different ways of life make the one or the other less habitually attentive and consequently less practiced. The memory of the lower races is also apparently quite as good as

that of the higher. The memory of the Australian native or the Eskimo is quite as good as that of our "oldest inhabitant;" and probably no one would claim that the modern scientist has a better memory than the bard of the Homeric period.

There is, however, a prevalent view, for the popularization of which Herbert Spencer is largely responsible, that primitive man has feeble powers of inhibition. Like the equally erroneous view that early man is a free and unfettered creature, it arises from our habit of assuming that, because his inhibitions and unfreedom do not correspond with our own restraints, they do not exist. Sir John Lubbock pointed out long ago that the savage is hedged about by conventions so minute and so mandatory that he is actually the least free person in the world. But, in spite of this, Spencer and others have insisted that he is incapable of self-restraint, is carried away like a child by the impulse of the moment, and is incapable of rejecting an immediate gratification for a greater future one. Cases like the one mentioned by Darwin of the Fuegian who struck and killed his little son when the latter dropped a basket of fish into the water are cited without regard to the fact that cases of sudden domestic violence and quick repentance are common in any city today; and the failure of the Australian blacks to throw back the small fry when fishing is referred to without pausing to consider that our practice of exterminating game and denuding our forests shows an amazing lack of individual self-restraint.

The truth is that the restraints exercised in a group depend largely on the traditions, views, and teachings of the group, and if we have this in mind, the savage cannot be called deficient on the side of inhibition. It is doubtful if modern society affords anything more striking in the way of inhibition than is found in connection with taboo, fetish, totemism, and ceremonial among the lower races. In the great majority of the American Indian and Australian tribes a man is strictly forbidden to kill or eat the animals whose name his clan bears as a totem. The central Australian may not, in addition, eat the flesh of any animal killed or even touched by persons standing in certain relations of kinship to him. At certain times also he is forbidden to eat the flesh of

a number of animals, and at all times he must share all food secured with the tribal elders and some others.

A native of Queensland will put his mark on an unripe zamia fruit, and may be sure it will be untouched and that when it is ripe he has only to go and get it. The Eskimos, though starving, will not molest the sacred seal basking before their huts. Similarly in social intercourse the inhibitions are numerous. To some of his sisters, blood and tribal, the Australian may not speak at all; to others only at certain distances, according to the degree of kinship. The west African fetish acts as a police, and property protected by it is safer than under civilized laws. Food and palm wine are placed beside the path with a piece of fetish suspended near by, and no one will touch them without leaving the proper payment. The garden of a native may be a mile from the house, unfenced, and sometimes unvisited for weeks by the owner; but it is immune from depredations if protected by fetish. Our proverb says, "A hungry belly has no ears," and it must be admitted that the inhibition of food impulses implies no small power of restraint.

Altogether too much has been made of inhibition, anyway, as a sign of mentality, for it is not even characteristic of the human species. The well-trained dog inhibits in the presence of the most enticing stimulations of the kitchen. And it is also true that one race, at least—the American Indian—makes inhibition the most conspicuous feature in its system of education. From the time the ice is broken to give him a cold plunge and begin the toughening process on the day of his birth, until he dies without a groan under torture, the Indian is schooled in the restraint of his impulses. He does not, indeed, practice our identical restraints, because his traditions and the run of his attention are different; but he has a capacity for controlling impulses equal to our own.

Another serious charge against the intelligence of the lower races is lack of the power of abstraction. They certainly do not deal largely in abstraction, and their languages are poor in abstract terms. But there is a great difference between the habit of thinking in abstract terms and the ability to do so.

The degree to which abstraction is employed in the activities

of a group depends on the complexity of the activities and on the complexity of consciousness in the group. When science, philosophy, and logic, and systems of reckoning time, space, and number, are taught in the schools; when the attention is not so much engaged in perceptual as in deliberate acts; and when thought is a profession, then abstract modes of thought are forced on the mind. This does not argue absence of the power of abstraction in the lower races, or even a low grade of ability, but lack of practice. To one skilled in any line an unpracticed person seems very stupid; and this is apparently the reason why travelers report that the black and yellow races have feeble powers of abstraction. It is generally admitted, however, that the use of speech involves the power of abstraction, so that all races have the power in some degree. When we come further to examine the degree in which they possess it, we find that they compare favorably with ourselves in any test which involves a fair comparison.

The proverb is a form of abstraction practiced by all races, and is perhaps the best test of the natural bent of the mind in this direction, because, like ballad poetry and slang, proverbial sayings do not originate with the educated class, but are of popular origin. At the same time, proverbs compare favorably with the *mots* of literature, and many proverbs have, in fact, drifted into literature and become connected with the names of great writers. Indeed, the saying that there is nothing new under the sun applies with such force and fidelity to literature that, if we should strip Hesiod and Homer and Chaucer of such phrases as "The half is greater than the whole," "It is a wise son that knows his own father" (which Shakespeare quotes the other end about), and "To make a virtue of necessity," and if we should further eliminate from literature the motives and sentiments also in ballad poetry and in popular thought, little would remain but form.

If we assume, then, that the popular mind—let us say the peasant mind—in the white race is as capable of abstraction as the mind of the higher classes, but not so specialized in this direction—and no one can doubt this in view of the academic record of country-bred boys—the following comparison of our

proverbs with those of the Africans of the Guinea coast is significant:

African. "Stone in the water-hole does not feel the cold."
English. "Habit is second nature."
A. "One tree does not make a forest."
E. "One swallow does not make a summer."
A. "I nearly killed the bird. No one can eat nearly in a stew."
E. "First catch your hare."
A. "Full-belly child says to hungry-belly child, 'Keep good cheer.'"
E. "We can all endure the misfortunes of others."
A. "Distant firewood is good firewood."
E. "Distance lends enchantment to the view."
A. "Ashes fly back in the face of him who throws them."
E. "Curses come home to roost."
A. "If the boy says he wants to tie the water with a string, ask him whether he means the water in the pot or the water in the lagoon."
E. "Answer a fool according to his folly."
A. "Cowries are men."
E. "Money makes the man."
A. "Cocoanut is not good for bird to eat."
E. "Sour grapes."
A. "He runs away from the sword and hides himself in the scabbard."
E. "Out of the fry-pan into the fire."
A. "A fool of Ika and an idiot of Iluka meet together to make friends."
E. "Birds of a feather flock together."
A. "The ground-pig [bandicoot] said: 'I do not feel so angry with the man who killed me as with the man who dashed me on the ground afterward.'"
E. "Adding insult to injury."
A. "Quick loving a woman means quick not loving a woman."
E. "Married in haste we repent at leisure."
A. "Three elders cannot all fail to pronounce the word ekulu [an antelope]; one may say *ekúlu,* another *ekulú,* but the third will say *ekulu.*"

E. "In a multitude of counselors there is safety."
A. "If the stomach is not strong, do not eat cockroaches."
E. "Milk for babes."
A. "No one should draw water from the spring in order to supply the river."
E. "Robbing Peter to pay Paul."
A. "The elephant makes a dust and the buffalo makes a dust, but the dust of the buffalo is lost in the dust of the elephant."
E. "*Duo cum faciunt idem non est idem.*"
A. "Ear, hear the other before you decide."
E. "*Audi alteram partem.*"

On the side of number we have another test of the power of abstraction; and while the lower races show lack of practice in this they show no lack of power. It is true that tribes have been found with no names for numbers beyond two, three, or five; but these are isolated groups, like the Veddahs and Bushmen, who have no trade or commerce, and lead a miserable existence, with little or nothing to count. The directions of attention and the simplicity or complexity of mental processes depend on the character of the external situation which the mind has to manipulate. If the activities are simple, the mind is simple, and if the activities were nil, the mind would be nil. The mind is nothing but a means of manipulating the outside world. Number, time, and space conceptions and systems become more complex and accurate, not as the human mind grows in capacity, but as activities become more varied and call for more extended and accurate systems of notation and measurement. Trade and commerce, machinery and manufacture, and all the processes of civilization involve specialization in the apprehension of series as such. Under these conditions the number technique becomes elaborate and requires time and instruction for its mastery. The advance which mathematics has made within a brief historical time is strikingly illustrated by the words with which the celebrated mathematician, Sir Henry Savile, who died in 1616, closed his career as a professor at Oxford:

"By the grace of God, gentlemen hearers, I have performed my promise. I have redeemed my pledge. I have explained,

according to my ability, the definitions, postulates, axioms, and the first eight propositions of the *Elements* of Euclid. Here, sinking under the weight of years, I lay down my art and my instruments."

From the standpoint of modern mathematics, Sir Henry Savile and the Bushman are both woefully backward; and in both cases the backwardness is not a matter of mental incapacity, but of the state of the science.

In respect, then, to brain structure and the more important mental faculties we find that no race is radically unlike the others. Still, it might happen that the mental activities and products of two groups were so different as to place them in different classes. But precisely the contrary is true. There is in force a principle called the law of parallelism in development, according to which any group takes much the same steps in development as any other. The group may be belated, indeed, and not reach certain stages, but the ground-patterns of life are the same in the lower races and in the higher. Mechanical inventions, textile industries, rude painting, sculpture, poetry, and song, marriage, and family life, organization under leaders, belief in spirits, a mythology and some form of church and state exist universally. At one time students of mankind, when they found a myth in Hawaii corresponding to the Greek story of Orpheus and Eurydice, or an Aztec poem of tender longing in absence, or a story of the deluge, were wont to conjecture how these could have been carried over from Greek or Elizabethan or Hebraic sources, or whether they did not afford evidence of a time when all branches of the human race dwelt together with a common fund of sentiment and tradition. But this standpoint has been abandoned, and it is recognized that the human mind and the outside world are essentially alike the world over; that the mind everywhere acts on the same principles; and that, ignoring the local, incidental, and eccentric, we find similar laws of growth among all peoples.

The number of things which can stimulate the human mind is somewhat definite and limited. Among them, for example, is death. This happens everywhere, and the death of a dear one may cause the living to imagine ways of being reunited. The

story of Orpheus and Eurydice may thus arise spontaneously and perpetually, wherever death and affection exist. Or, there may be a separation from home and friends, and the mind runs back in distress and longing over the happy past, and the state of consciousness aroused is as definite a fact among savages as among the civilized. A beautiful passage in Homer represents Helen looking out on the Greeks from the wall of Troy and saying:

"And now behold I all the other glancing-eyed Achaians, whom well I could discern and tell their names; but two captains of the host can I not see, even Kastor tamer of horses and Polydukes the skilful boxer, mine own brethren whom the same mother bare. Either they came not in the company from lovely Lakedaimon; or they came hither indeed in their sea-faring ships, but now will not enter into the battle of warriors, for fear of the many scornings and revilings that are mine."

When this passage is thus stripped of its technical excellence by a prose translation, we may compare it with the following New Zealand lament composed by a young woman who was captured on the island of Tuhua and carried to a mountain from which she could see her home:

"My regret is not to be expressed. Tears, like a spring, gush from my eyes. I wonder whatever is Tu Kainku [her lover] doing, he who deserted me. Now I climb upon the ridge of Mount Parahaki, whence is clear the view of the island of Tuhua. I see with regret the lofty Tanmo where dwells [the chief] Tangiteruru. If I were there, the shark's tooth would hang from my ear. How fine, how beautiful should I look! . . . . But enough of this; I must return to my rags and to my nothing at all."

The situation of the two women in this case is not identical, and it would be possible to claim that the Greek and Maori passages differ in tone and coloring; but it remains true that a captive woman of any race, will feel much the same as the captive woman of any other race when her thoughts turn toward home, and that the poetry growing out of such a situation will be everywhere of the same general pattern.

Similarly, to take an illustration from morals, we find that widely different in complexion and detail as are the moral codes

of lower and higher groups, say the Hebrews and the African Kafirs, yet the general patterns of morality are strikingly coincident. It is reported of the Kafirs that "they possess laws which meet every crime which may be committed." Theft is punished by restitution and fine; injured cattle, by death or fine; false witness, by a heavy fine; adultery, by fine or death; rape, by fine or death; poisoning or witchcraft, by death and confiscation of property; murder, by death or fine; treason or desertion from the tribe, by death and confiscation. The Kafirs and Hebrews are not at the same level of culture, and we miss the more abstract and monotheistic admonitions of the higher religion—"thou shalt not covet; thou shalt worship no other gods before me"—but the intelligence shown by the social mind in adjusting the individual to society may fairly be called the same grade of intelligence in the two cases.

When the environmental life of two groups is more alike and the general cultural conditions more correspondent, the parallelism of thought and practice becomes more striking. The recently discovered Assyrian Code of Hammurabi (about 2500 B. C.) contains striking correspondences with the Mosaic code; and while Semitic scholars probably have good and sufficient reasons for holding that the Mosaic code was strongly influenced by the Assyrian, we may yet be very confident that the two codes would have been of the same general character if no influence whatever had passed from one to the other.

The institutions and practices of a people are a product of the mind; and if the early and spontaneous products of mind are everywhere of the same general pattern as the later manifestations, only less developed, refined, and specialized, it may well be that failure to progress equally is not due to essential unlikeness of mind, but to conditions lying outside the mind.

Another test of mental ability which deserves special notice is mechanical ingenuity. Our white pre-eminence owes much to this faculty, and the lower races are reckoned defective in it. But the lower races do invent, and it is doubtful whether one invention is ever much more difficult than another. On the psychological side, an invention means that the mind sees a roundabout way of reaching an end when it cannot be reached directly.

It brings into play the associative memory, and involves the recognition of analogies. There is a certain likeness between the flying back of a bough in one's face and the rebound of a bow, between a serpent's tooth and a poisoned arrow, between floating timber and a raft or boat—and water, steam, and electricity are like a horse in one respect—they will all make wheels go around, and do work.

Now, the savage had this faculty of seeing analogies and doing things in indirect ways. With the club, knife, and sword he struck more effectively than with the fist; with hooks, traps, nets, and pitfalls he understood how to seize game more surely than with the hands; in the bow and arrow, spear, blow-gun, and spring-trap he devised motion swifter than that of his own body; he protected himself with armor imitated from the hides and scales of animals, and turned their venom back on themselves. That the savage should have originated the inventive process and carried it on systematically is, indeed, more wonderful than that his civilized successors should continue the process; for every beginning is difficult.

When occupations become specialized and one set of men has continually to do with one and only one set of machinery and forces, the constant play of attention over the limited field naturally results in improvements and the introduction of new principles. Modern inventions are magnificent and seem quite to overshadow the simpler devices of primitive times; but when we consider the precedents, copies, resources, and accumulated knowledge with which the modern investigator works, and, on the other hand, the resourcelessness of primitive man in materials, ideas, and in the inventive habit itself, I confess that the bow and arrow seems to me the most wonderful invention in the world.

Viewing the question from a different angle, we find another argument for the homogeneous character of the human mind in the fact that the patterns of interest of the civilized show no variation from those of the savage. Not only the appetites and vanities remain essentially the same, but, on the side of intellectual interest, the type of mental reaction fixed in the savage by the food-quest has come down unaltered to the man of science as well as to the man of the street. In circumventing enemies and

capturing game, both the attention and the organic processes worked together in primitive man under great stress and strain. Whenever, indeed, a strain is thrown on the attention, the heart and organs of respiration are put under pressure also in their effort to assist the attention in manipulating the problem; and these organic fluctuations are felt as pleasure and pain. The strains thrown on the attention of primitive man were connected with his struggle for life; and not only in the actual encounter with men and animals did emotion run high, but the memory and anticipation of conflict reinstated the emotional conditions in those periods when he was meditating future conflicts and preparing his bows and arrows, traps and poisons. The problem of invention, the reflective and scientific side of his life, was suffused with interest, because the manufacture of the weapon was, psychologically speaking, a part of the fight.

This type of interest, originating in the hunt, remains dominant in the mind down to the present time. Once constructed to take an interest in the hunting problem, it takes an interest in any problem whatever. Not only do hunting and fighting and all competitive games—which are of precisely the same psychological pattern as the hunt and fight—remain of perennial interest, but all the useful occupations are interesting in just the degree that this pattern is preserved. The man of science works at problems and uses his ingenuity in making an engine in the laboratory in the same way that primitive man used his mind in making a trap. So long as the problem is present, the interest is sustained; and the interest ceases when the problematical is removed. Consequently, all modern occupations of the hunting pattern—scientific investigation, law, medicine, the organization of business, trade speculation, and the arts and crafts—are interesting as a game; while those occupations into which the division of labor enters to the degree that the workman is not attempting to control a problem, and in which the same acts are repeated an indefinite number of times, lose interest and become extremely irksome.

This means that the brain acts pleasurably on the principle it was made up to act on in the most primitive times, and the rest is a burden. There has been no brain change, but the social

changes have been momentous; and the brain of each new generation is brought into contact with new traditions, inhibitions, copies, obligations, problems, so that the run of attention and content of consciousness are different. Social suggestion works marvels in the manipulation of the mind; but the change is not in the brain as an organ; it is rather in the character of the stimulations thrust on it by society.

The child begins as a savage, and after we have brought to bear all the influence of home, school, and church to socialize him, we speak as though his nature had changed organically, and institute a parallelism between the child and the race, assuming that the child's brain passes in a recapitulatory way through phases of development corresponding to epochs in the history of the race. I have no doubt myself that this theory of recapitulation is largely a misapprehension. A stream of social influence is turned loose on the child; and if the attention to him is incessant and wise, and the copies he has are good and stimulating, he is molded nearer to the heart's desire. Sometimes he escapes, and becomes a criminal, tramp, sport, or artist; and even if made into an impeccable and model citizen, he periodically breaks away from the network of social habit and goes a-fishing.

The fundamental explanation of the difference in the mental life of two groups is not that the capacity of the brain to do work is different, but that the attention is not in the two cases stimulated and engaged along the same lines. Wherever society furnishes copies and stimulations of a certain kind, a body of knowledge and a technique, practically all its members are able to work on the plan and scale in vogue there, and members of an alien race who become acquainted in a real sense with the system can work under it. But when society does not furnish the stimulations, or when it has preconceptions which tend to inhibit the run of attention in given lines, then the individual shows no intelligence in these lines. This may be illustrated in the fields of scientific and artistic interest. Among the Hebrews a religious inhibition—"thou shalt not make unto thee any graven image"—was sufficient to prevent anything like the sculpture of the Greeks; and the doctrine of the resurrection of the body in the early Christian church, and the teaching that man was made in the

image of God, formed an almost insuperable obstacle to the study of human anatomy.

The Mohammedan attitude toward scientific interest is represented by the following extracts from a letter from an oriental official to a western inquirer, printed by Sir Austen Henry Layard:

"My illustrious Friend and Joy of my Liver:

"The thing which you ask of me is both difficult and useless. Although I have passed all my days in this place, I have neither counted the houses nor inquired into the number of the inhabitants; and as to what one person loads on his mules and the other stows away in the bottom of his ship, that is no business of mine. But above all, as to the previous history of this city, God only knows the amount of dirt and confusion that the infidels may have eaten before the coming of the sword of Islam. It were unprofitable for us to inquire into it. . . . . Listen, O my son! There is no wisdom equal to the belief in God! He created the world, and shall we liken ourselves unto him in seeking to penetrate into the mysteries of his creation? Shall we say, Behold this star spinneth around that star, and this other star with a tail goeth and cometh in so many years? Let it go. He from whose hand it came will guide and direct it. . . . . Thou art learned in the things I care not for, and as for that which thou hast seen, I spit upon it. Will much knowledge create thee a double belly, or wilt thou seek paradise with thine eyes?

"The meek in spirit,

"Imaum Ali Zadi"

The works of Sir Henry Maine, who gained by his long residence in India a profound insight into oriental character, frequently point out that the eastern pride in conservatism is quite as real as the western pride in progress:

"Vast populations, some of them with a civilization considerable but peculiar, detest that which in the language of the West would be called reform. The entire Mohammedan world detests it. The multitudes of colored men who swarm in the great continent of Africa detest it, and it is detested by that large part of mankind which we are accustomed to leave on one side as bar-

barous or savage. The millions upon millions of men who fill the Chinese Empire loathe it and (what is more) despise it. . . . . There are few things more remarkable, and in their way more instructive, than the stubborn incredulity and disdain which a man belonging to the cultivated part of Chinese society opposes to the vaunts of western civilization which he frequently hears. . . . . There is in India a minority, educated at the feet of English politicians and in books saturated with English political ideas, which has learned to repeat their language; but it is doubtful whether even these, if they had a voice in the matter, would allow a finger to be laid on the very subjects with which European legislation is beginning to concern itself—social and religious usage. There is not, however, the shadow of a doubt that the enormous mass of the Indian population hates and dreads change.

"To the fact that the enthusiasm for change is comparatively rare must be added the fact that it is extremely modern. It is known but to a small part of mankind, and to that part but for a short period during a history of incalculable length."

The oriental attitude does not argue a lack of brain power, but a prepossession hostile to scientific inquiry. The society represented does not interest its members in what, from the western standpoint, is knowledge.

The Chinese afford a fine example of a people of great natural ability letting their intelligence run to waste from lack of a scientific standpoint. As indicated above, they are not defective in brain weight, and their application to study is long continued and very severe; but their attention is directed to matters which cannot possibly make them wise from the occidental standpoint. They learn no mathematics and no science, but spend years in copying the poetry of the T'ang Dynasty, in order to learn the Chinese characters, and in the end cannot write the language correctly because many modern characters are not represented in this ancient poetry. Their attention to Chinese history is great, as befits their reverence for the past; but they do not organize their knowledge, they have no adequate textbooks or apparatus for study, and they make no clear distinction between fact and fiction. In general, they learn only rules and no principles, and rely on memory without the aid of reason, with the result that

the man who stops studying often forgets everything, and the professional student is amazingly ignorant in the line of his own work: "Multitudes of Chinese scholars know next to nothing about matters directly in the line of their studies, and in regard to which we should consider ignorance positively disgraceful. A venerable teacher remarked to the writer with a charming naïveté that he had never understood the allusions in the Trimetrical Classic (which stands at the very threshold of Chinese study) until at the age of sixty he had an opportunity to read a Universal History prepared by a missionary, in which for the first time Chinese history was made accessible to him."

Add to this that the whole of their higher learning, corresponding to our university system, consists in writing essays and always more essays on the Chinese classics, and "it is impossible," as Mr. Smith points out, "not to marvel at the measure of success which has attended the use of such materials in China." But when this people is in possession of the technique of the western world—a logic, general ideas, experimentation—we cannot reasonably doubt that they will be able to work the western system as their cousins, the Japanese, are doing, and perhaps they, too, may better the instruction.

White effectiveness is probably due to a superior technique acting in connection with a superior body of knowledge and sentiment. Of two groups having equal mental endowment, one may outstrip the other by the mere dominance of incident. It is a notorious fact that the course of human history has been largely without prevision or direction. Things have drifted and forces have arisen. Under these conditions an unusual incident—the emergence of a great mind or a forcible personality, or the operation of influences as subtle as those which determine fashions in dress—may establish social habits and copies which will give a distinct character to the modes of attention and mental life of the group. The most significant fact for white development is the emergence among the Greeks of a number of eminent men who developed logic, the experimental method, and philosophic interest, and fixed in their group the habit of looking behind the incident for the general law. Mediaeval attention was diverted from these lines by a religious movement, and the race

lost for a time the key to progress and got clean away from the Greek copies; but it found them again and took a fresh start with the revival of Greek learning. It is quite possible to make a fetish of classical learning; but Sir Henry Maine's remark, "Nothing moves in the modern world that is not Greek in its origin," is quite just.

The real variable is the individual, not the race. In the beginning—perhaps as the result of a mutation or series of mutations—a type of brain developed which has remained relatively fixed in all times and among all races. This brain will never have any faculty in addition to what it now possesses, because as a type of structure it is as fixed as the species itself, and is indeed a mark of species. It is not apparent either that we are greatly in need of another faculty, or that we could make use of it even if by a chance mutation it should emerge, since with the power of abstraction we are able to do any class of work we know anything about. Moreover, the brain is less likely to make a leap now than in earlier time, both because the conditions of nature are more fixed or more nearly controlled by man, and hence the urgency of adjustment to sharp variations in external conditions is removed, and because the struggle for existence has been mitigated so that the unfit survive along with the fit. Indeed, the rapid increase in idiocy and insanity shown by statistics indicates that the brain is deteriorating slightly, *on the average,* as compared with earlier times. . . .—W. I. Thomas, *Sex and Society,* "The Mind of Woman and the Lower Races," 258–89.

INTERPRETATION OF SAVAGE MIND

The psychical attitudes and traits of the savage are more than stages through which mind has passed, leaving them behind. They are outgrowths which have entered decisively into further evolution, and as such form an integral part of the framework of present mental organization. Such positive significance is commonly attributed, in theory at least, to animal mind; but the mental structure of the savage, which presumably has an even greater relevancy for genetic psychology, is strangely neglected.

The cause of this neglect I believe lies in the scant results so far secured, because of the abuse of the comparative method—

which abuse in turn is due to the lack of a proper method of interpretation. Comparison as currently employed is defective—even perverse—in at least three respects. In the first place, it is used indiscriminately and arbitrarily. Facts are torn loose from their context in social and natural environment and heaped miscellaneously together, because they have impressed the observer as alike in some respect. Upon a single page of Spencer, which I chanced to open in looking for an illustration of this point, appear Kamschadales, Kirghiz, Bedouins, East Africans, Bechuanas, Damaras, Hottentots, Malays, Papuans, Fijians, Andamanese—all cited in reference to establish a certain common property of primitive minds. What would we think of a biologist who appealed successively to some external characteristic of say snake, butterfly, elephant, oyster and robin in support of a statement? And yet the peoples mentioned present widely remote cultural resources, varied environments and distinctive institutions. What is the scientific value of a proposition thus arrived at?

In the second place, this haphazard, uncontrollable selection yields only static facts—facts which lack the dynamic quality necessary to a genetic consideration. The following is a summary of Mr. Spencer's characterizations of primitive man, emotional and intellectual:

He is explosive and chaotic in feeling, improvident, childishly mirthful, intolerant of restraint, with but small flow of altruistic feeling, attentive to meaningless detail and incapable of selecting the facts from which conclusions may be drawn, with feeble grasp of thought, incapable of rational surprise, incurious, lacking in ingenuity and constructive imagination. Even the one quality which is stated positively, namely, keenness of perception, is interpreted in a purely negative way, as a character antagonistic to reflective development. "In proportion as the mental energies go out in restless perception, they cannot go out in deliberate thought." And this from a sensationalist in psychology!

Such descriptions as these also bear out my first point. Mr. Spencer himself admits frequent and marked discrepancies (*e. g.*, pp. 56, 59, 62, 65, etc.), and it would not be difficult to bring

together a considerable mass of proof-texts to support the exact opposite of each of his assertions. But my point here is that present civilized mind is virtually taken as a standard, and savage mind is measured off on this fixed scale.

It is no wonder that the outcome is negative; that primitive mind is described in terms of 'lack,' 'absence': its traits are incapacities. Qualities defined in such fashion are surely useless in suggesting, to say nothing of determining, progress, and are correspondingly infertile for genetic psychology, which is interested in becoming, growth, development.

The third remark is that the results thus reached, even passing them as correct, yield only loose aggregates of unrelated traits—not a coherent scheme of mind. We do not escape from an inorganic conglomerate conception of mind by just abusing the 'faculty' psychology. Our standpoint must be more positive. We must recognize that mind has a pattern, a scheme of arrangement in its constituent elements, and that it is the business of a serious comparative psychology to exhibit these patterns, forms or types in detail. By such terms, I do not mean anything metaphysical; I mean to indicate the necessity of a conception such as is a commonplace with the zoölogist. Terms like articulate or vertebrate, carnivor or herbivor, are 'pattern' terms of the sort intended. They imply that an animal is something more than a random composite of isolated parts, made by taking an eye here, an ear there, a set of teeth somewhere else. They signify that the constituent elements are arranged in a certain way; that in being co-adapted to the dominant functions of the organism they are of necessity co-related with one another. Genetic psychology of mind will advance only as it discovers and specifies generic forms or patterns of this sort in psychic morphology.

It is a method for the determination of such types that I wish to suggest in this paper. The biological point of view commits us to the conviction that mind, whatever else it may be, is at least an organ of service for the control of environment in relation to the ends of the life process.

If we search in any social group for the special functions to which mind is thus relative, occupations at once suggest them-

selves.[1] Occupations determine the fundamental modes of activity, and hence control the formation and use of habits. These habits, in turn, are something more than practical and overt. 'Apperceptive masses' and associational tracts of necessity conform to the dominant activities. The occupations determine the chief modes of satisfaction, the standards of success and failure. Hence they furnish the working classifications and definitions of value; they control the desire processes. Moreover, they decide the sets of objects and relations that are important, and thereby provide the content or material of attention, and the qualities that are interestingly significant. The directions given to mental life thereby extend to emotional and intellectual characteristics. So fundamental and pervasive is the group of occupational activities that it affords the scheme or pattern of the structural organization of mental traits. Occupations integrate special elements into a functioning whole.

Because the hunting life differs from, say, the agricultural, in the sort of satisfactions and ends it furnishes, in the objects to which it requires attention, in the problems it sets for reflection and deliberation, as well as in the psycho-physic coordinations it stimulates and selects, we may well speak, and without metaphor, of the hunting psychosis or mental type. And so of the pastoral, the military, the trading, the manually productive (or manufacturing) occupations and so on. As a specific illustration of the standpoint and method, I shall take the hunting vocation, and that as carried on by the Australian aborigines. I shall try first to describe its chief distinguishing marks; and then to show how the mental pattern developed is carried over into various activities, customs and products, which on their face have nothing to do with the hunting life. If a controlling influence of this sort can be made out—if it can be shown that art, war, marriage, etc., tend to be psychologically assimilated to the pattern developed in the hunting vocation, we shall thereby get an important method for the interpretation of

[1] We might almost say, in the converse direction, that biological genera are 'occupational' classifications. They connote different ways of getting a living with the different instrumentalities (organs) appropriate to them, and the different associative relations set up by them.

social institutions and cultural resources—a psychological method for sociology.

The Australian lives in an environment upon the whole benign, without intense or violent unfavorable exhibition of natural forces (save in alternations of drought and flood in some portions), not made dangerous by beasts of prey, and with a sufficient supply of food to maintain small groups in a good state of nutrition though not abundant enough to do this without continual change of abode. The tribes had no cultivated plants, no domesticated animals (save the dingo dog), hence no beasts of burden, and no knowledge or use of metals.[2]

Now as to the psychic pattern formed under such circumstances. How are the sensory-motor coördinations common to all men organized, how stimulated and inhibited into relatively permanent psychic habits, through the activities appropriate to such a situation?

By the nature of the case, food and sex stimuli are the most exigent of all excitants to psycho-physic activity, and the interests connected with them are the most intense and persistent. But with civilized man, all sorts of intermediate terms come in between the stimulus and the overt act, and between the overt act and the final satisfaction. Man no longer defines his end to be the satisfaction of hunger as such. It is so complicated and loaded with all kinds of technical activities, associations, deliberations and social divisions of labor, that conscious attention and interest are in the process and its content. Even in the crudest agriculture, means are developed to the point where they demand attention on their own account, and control the formation and use of habits to such an extent that they are the

[2] All these points are important, for the general hunting psychosis exhibits marked differentiations when developed in relation to ferocious beasts; in relation to a very sparse or very abundant food supply; in relation to violently hostile natural forces; and when hunting is pursued in connection with various degrees of agriculture or domesticated herds or flocks. For economy of space, I have omitted reference to the few portions of Australia where the food supply (generally fish in such circumstances) is sufficiently abundant to permit quasi-permanent abodes, though the psychological variations thus induced are interesting.

selves.[1] Occupations determine the fundamental modes of activity, and hence control the formation and use of habits. These habits, in turn, are something more than practical and overt. 'Apperceptive masses' and associational tracts of necessity conform to the dominant activities. The occupations determine the chief modes of satisfaction, the standards of success and failure. Hence they furnish the working classifications and definitions of value; they control the desire processes. Moreover, they decide the sets of objects and relations that are important, and thereby provide the content or material of attention, and the qualities that are interestingly significant. The directions given to mental life thereby extend to emotional and intellectual characteristics. So fundamental and pervasive is the group of occupational activities that it affords the scheme or pattern of the structural organization of mental traits. Occupations integrate special elements into a functioning whole.

Because the hunting life differs from, say, the agricultural, in the sort of satisfactions and ends it furnishes, in the objects to which it requires attention, in the problems it sets for reflection and deliberation, as well as in the psycho-physic coordinations it stimulates and selects, we may well speak, and without metaphor, of the hunting psychosis or mental type. And so of the pastoral, the military, the trading, the manually productive (or manufacturing) occupations and so on. As a specific illustration of the standpoint and method, I shall take the hunting vocation, and that as carried on by the Australian aborigines. I shall try first to describe its chief distinguishing marks; and then to show how the mental pattern developed is carried over into various activities, customs and products, which on their face have nothing to do with the hunting life. If a controlling influence of this sort can be made out—if it can be shown that art, war, marriage, etc., tend to be psychologically assimilated to the pattern developed in the hunting vocation, we shall thereby get an important method for the interpretation of

[1] We might almost say, in the converse direction, that biological genera are 'occupational' classifications. They connote different ways of getting a living with the different instrumentalities (organs) appropriate to them, and the different associative relations set up by them.

social institutions and cultural resources—a psychological method for sociology.

The Australian lives in an environment upon the whole benign, without intense or violent unfavorable exhibition of natural forces (save in alternations of drought and flood in some portions), not made dangerous by beasts of prey, and with a sufficient supply of food to maintain small groups in a good state of nutrition though not abundant enough to do this without continual change of abode. The tribes had no cultivated plants, no domesticated animals (save the dingo dog), hence no beasts of burden, and no knowledge or use of metals.[2]

Now as to the psychic pattern formed under such circumstances. How are the sensory-motor coördinations common to all men organized, how stimulated and inhibited into relatively permanent psychic habits, through the activities appropriate to such a situation?

By the nature of the case, food and sex stimuli are the most exigent of all excitants to psycho-physic activity, and the interests connected with them are the most intense and persistent. But with civilized man, all sorts of intermediate terms come in between the stimulus and the overt act, and between the overt act and the final satisfaction. Man no longer defines his end to be the satisfaction of hunger as such. It is so complicated and loaded with all kinds of technical activities, associations, deliberations and social divisions of labor, that conscious attention and interest are in the process and its content. Even in the crudest agriculture, means are developed to the point where they demand attention on their own account, and control the formation and use of habits to such an extent that they are the

[2] All these points are important, for the general hunting psychosis exhibits marked differentiations when developed in relation to ferocious beasts; in relation to a very sparse or very abundant food supply; in relation to violently hostile natural forces; and when hunting is pursued in connection with various degrees of agriculture or domesticated herds or flocks. For economy of space, I have omitted reference to the few portions of Australia where the food supply (generally fish in such circumstances) is sufficiently abundant to permit quasi-permanent abodes, though the psychological variations thus induced are interesting.

central interests, while the food process and enjoyment as such is incidental and occasional.

The gathering and saving of seed, preparing the ground, sowing, tending, weeding, care of cattle, making of improvements, continued observation of times and seasons engage thought and direct action. In a word, in all post-hunting situations the end is mentally apprehended and appreciated not as food satisfaction, but as a continuously ordered series of activities and of objective contents pertaining to them. And hence the direct and personal display of energy, personal putting forth of effort, personal acquisition and use of skill are not conceived or felt as immediate parts of the food process. But the exact contrary is the case in hunting. There are no intermediate appliances, no adjustment of means to remote ends, no postponements of satisfaction, no transfer of interest and attention over to a complex system of acts and objects. Want, effort, skill and satisfaction stand in the closest relations to one another. The ultimate aim and the urgent concern of the moment are identical; memory of the past and hope for the future meet and are lost in the stress of the present problem; tools, implements, weapons are not mechanical and objective means, but are part of the present activity, organic parts of personal skill and effort. The land is not a means to a result but an intimate and fused portion of life—a matter not of objective inspection and analysis, but of affectionate and sympathetic regard. The making of weapons is felt as a part of the exciting use of them. Plants and animals are not 'things' but are factors in the display of energy and form the contents of most intense satisfactions. The 'animism' of primitive mind is a necessary expression of the immediacy of relation existing between want, overt activity, that which affords satisfaction and the attained satisfaction itself. Only when things are treated simply as *means,* are marked off and held off against remote ends, do they become 'objects.'

Such immediacy of interest, attention and deed is the essential trait of the nomad hunter. He has no cultivated plants, no system of appliances for tending and regulating plants and animals; he does not even anticipate the future by drying meat. When food is abundant, he gorges himself, but does not save.

His habitation is a temporary improvised hut. In the interior, he does not even save skins for clothes in the cold of winter, but cooks them with the rest of the carcass. Generally even by the water he has no permanent boats, but makes one of bark when and as he needs it. He has no tools or equipment except those actually in use at the moment of getting or using food—weapons of the chase and war. Even set traps and nets which work for the savage are practically unknown. He catches beast, bird and fish with his own hands when he does not use club or spear; and if he uses nets he is himself personally concerned in their use.

Now such facts as these are usually given a purely negative interpretation. They are used as proofs of the incapacities of the savage. But in fact they are parts of a very positive psychosis, which taken in itself and not merely measured against something else, requires and exhibits highly specialized skill and affords intense satisfactions—psychical and social satisfactions, not merely sensuous indulgences. The savage's repugnance to what we term a higher plane of life is not due to stupidity or dullness or apathy—or to any other merely negative qualities—such traits are a later development and fit the individual only too readily for exploitation as a tool by 'superior races.' His aversion is due to the fact that in the new occupations he does not have so clear or so intense a sphere for the display of intellectual and practical skill, or such opportunity for a dramatic play of emotion. Consciousness, even if superficial, is maintained at a higher intensity.

The hunting life is of necessity one of great emotional interest, and of adequate demand for acquiring and using highly specialized skills of sense, movement, ingenuity, strategy and combat. It is hardly necessary to argue the first point. Game and sport are still words which mean the most intense immediate play of the emotions, running their entire gamut. And these terms still are applied most liberally and most appropriately to hunting. The transferred application of the hunting language to pursuit of truth, plot interest, business adventure and speculation, to all intense and active forms of amusement, to gambling and the 'sporting life,' evidences how

deeply imbedded in later consciousness is the hunting pattern or schema.[3]

The interest of the game, the alternate suspense and movement, the strained and alert attention to stimuli always changing, always demanding graceful, prompt, strategic and forceful response; the play of emotions along the scale of want, effort, success or failure—this is the very type, psychically speaking, of the drama. The breathless interest with which we hang upon the movement of play or novel are reflexes of the mental attitudes evolved in the hunting vocation.

The savage loses nothing in enjoyment of the drama because it means life or death to him.[4] The emotional interest in the game itself is moreover immensely reinforced and deepened by its social accompaniments. Skill and success mean applause and admiration; it means the possibility of lavish generosity—the quality that wins all. Rivalry and emulation and vanity all quicken and feed it. It means sexual admiration and conquests—more wives or more elopements. It means, if persistent, the ultimate selection of the individual for all tribal positions of dignity and authority.

But perhaps the most conclusive evidence of the emotional satisfactions involved is the fact that the men reserve the hunting occupations to themselves, and give to the women everything that has to do with the vegetable side of existence (where the passive subject matter does not arouse the dramatic play), and all activity of every sort that involves the more remote adaptation of means to ends—and hence, drudgery.[5]

The same sort of evidence is found in the fact that, with change to agricultural life, other than hunting types of action are (if women do not suffice) handed over to slaves, and the energy and skill acquired go into the game of war. This also

[3] See Thomas, 'The Gaming Instinct,' *American Journal of Sociology*, Vol. VI., p. 750.

[4] Though some writers even say that the savage's interest in the game of hunting is so great that he hunts for the excitement rather than for food. See Lumholtz, 'Among Cannibals,' p. 161 and p. 191.

[5] This collateral development of a different mental pattern in women is a matter of the greatest significance, in itself, in its relation to subsequent developments and in relation to present mental interests.

explains the apparent contradiction in the psychic retrogression of the mass with some advances in civilization. The gain is found in the freed activities of the few, and in the cumulation of the objective instrumentalities of social life, and in the final development, under the discipline of subjection, of new modes of interest having to do with remoter ends—considerations, however, which are psychologically realized by the mass only at much later periods.

As to the high degree of skill, practical and intellectual, stimulated and created by the hunting occupation, the case is equally clear—provided, that is, we bear in mind the types of skill appropriate to the immediate adjustments required, and do not look for qualities irrelevant because useless in such a situation.

No one has ever called a purely hunting race dull, apathetic or stupid. Much has been written regarding the aversion of savages to higher resources of civilization—their refusal to adopt iron tools or weapons, for example, and their sodden absorption in routine habits. None of this applies to the Australian or any other *pure* hunting type. Their attention is mobile and fluid as is their life; they are eager to the point of greed for anything which will fit into their dramatic situations so as to intensify skill and increase emotion. Here again the apparent discrepancies strengthen the case. It is when the native is forced into an alien use of the new resources, instead of adapting them to his own ends, that his workmanship, skill and artistic taste uniformly degenerate.

Competent testimony is unanimous as to the quickness and accuracy of apprehension evinced by the natives in coming in contact even for the first time with complicated constructive devices of civilized man, provided only these appliances have a direct or immediate action-index. One of the commonest remarks of travelers, hardly prepossessed in favor of the savage, is their superiority in keenness, alertness and a sort of intelligent good humor to the average English rustic. The accuracy, quickness and minuteness of perception of eye, ear and smell are no barren accumulation of meaningless sense detail as Spencer would have it; they are the cultivation to the highest point of skill

and emotional availability of the instrumentalities and modes of a dramatic life. The same applies to the native's interest in hard and sustained labor, to his patience and perseverance as well as to his gracefulness and dexterity of movement—the latter extending to fingers and toes to an extent which makes even skilled Europeans awkward and clumsy. The usual denial of power of continued hard work, of patience and of endurance to the savage is based once more upon trying him by a foreign standard—interest in ends which involve a long series of means detached from all problems of purely personal adjustment. Patience and persistence and long-maintained effort the savage does show when they come within the scope of that immediate contest situation with reference to which his mental pattern is formed.

I hardly need say, I suppose, that in saying these things I have no desire to idealize savage intelligence and volition. The savage paid for highly specialized skill in all matters of personal adjustment, by incapacity in all that is impersonal, that is to say, remote, generalized, objectified, abstracted. But my point is that we understand their incapacities only by seeing them as the obverse side of positively organized developments; and, still more, that it is only by viewing them primarily in their positive aspect that we grasp the genetic significance of savage mind for the long and tortuous process of mental development, and secure from its consideration assistance in comprehending the structure of present mind.

I come now to a brief consideration of the second main point —the extent to which this psychic pattern is carried over into all the relations of life, and becomes emotionally an assimilating medium. First, take art. The art of the Australian is not constructive, not architectonic, not graphic, but dramatic and mimetic. Every writer who has direct knowledge of the Australian corroborees, whether occasional and secular, or state and ceremonial, testifies to the remarkable interest shown in dramatic representation. The reproduction by dances, of the movements and behavior of the animals of the chase is startling. Great humor is also shown in adapting and reproducing recent events and personal traits. These performances are attended with high

emotional attacks; and all the accompaniments of decoration, song, music, spectators' shouts, etc., are designed to revive the feelings appropriate to the immediate conflict-situations which mean so much to the savage. Novelty is at a distinct premium; old songs are discarded; one of the chief interests at an inter-tribal friendly meeting is learning new dance-songs; and acquisition of a new one is often sufficient motive for invitation to a general meeting.

The ceremonial corroborees are of course more than forms of art. We have in them the sole exception to the principle that the activities of the hunter are immediate. Here they are weighted with a highly complicated structure of elaborated traditional rights—elaborated and complicated almost beyond belief. But it is an exception which proves the rule. This apparatus of traditionary agencies has no reference to either practical or intellectual control, it gets nowhere objectively. Its effect is just to reinstate the emotional excitations of the food conflict-situations; and particularly to frame in the young the psychic disposition which will make them thoroughly interested in the necessary performances.

It is a natural transition to religion. Totemism and the abundance of plant and animal myths (especially the latter) and the paucity of cosmic and cosmogonic myth testify to the centering of attention upon the content of the combat, or hunting situation. It would be absurd to attempt in a parenthesis an explanation of totemism, but certainly any explanation is radically defective which does not make much of the implication of tribe and animal in the same emotional situation. Hunter and hunted are the factors of a single tension; the mental situation cannot be defined except in terms of both. If the animals get away, it is surely because they try; and if they are caught it is surely because after all they are not totally adverse—they are friendly. And they seal their friendliness by sharing in one of the most intense satisfactions of life—savory food for the hungry. They are, as a matter of fact, co-partners in the life of the group. Why then should they not be represented as of close kin? In any case, attention and interest center in animals more persistently than in anything else; and they afford the content of

whatever concentrated intellectual activity goes on. The food taboos, with their supernatural sanctions, certainly create tensions, or reinstate conflict-situations, in the mind; and thus serve to keep alive in consciousness values which otherwise would be more nearly relegated to the mechanically habitual, or become sensuous, not idealized or emotionalized.

I turn now to matters of death and sickness, their cause, and cure, or, if cure is hopeless, their remedy by expiation. Here the assimilation to the psychosis of the hunting activity is obvious. Sickness, and death from sickness, are uniformly treated as the results of attacks of other persons, who with secret and strange weapons are hunting their victim to his death. And the remedy is to hunt the hunter, to get the aid of that wonderful pursuer and tracker, the medicine man, who by superior ability runs down the guilty party, or with great skill hunts out the deadly missile or poison lodged in the frame of his victim.

If death ensues, then we have the devices for tracking and locating the guilty party. And then comes actual conflict, actual man-hunting. Death can be avenged only by the ordeal of battle—and here we have the explanation of the wars and warlike performances of which so much has been made. It is, however, now generally admitted that the chief object of these warlike meetings is to reinstate the emotion of conflict rather than to kill. They are, so to speak, psychological duels on a large scale—as one observer says, they are 'fights with a maximum of noise, boast, outward show of courage and a minimum of casualties.' But the manouvering, throwing and dodging that take place are a positive dramatic exercise in the utilities of their occupational pursuits.

Finally, as to marriage, and the relations between the sexes. What was said concerning the impossibility of an adequate account of totemism applies with greater force to the problem of the system of group relationships which determine marital possibilities. It is clear, however, that the system of injunctions and restrictions serves to develop a scheme of inhibitions and intensified stimuli which makes sex-satisfaction a matter of pursuit, conflict, victory and trophy over again. There is neither complete absence of inhibition, which, involving little personal

adjustment, does not bring the sexual sensations into the sphere of emotion as such; nor is there a system of voluntary agreement and affection, which is possible only with a highly developed method of intellectual control, and large outlooks upon a long future. There is just the ratio between freedom and restraint that develops the dramatic instinct, and gives courtship and the possession of women all the emotional joys of the hunt—personal display, rivalry, enough exercise of force to stimulate the organism; and the emotion of prowess joined to the physical sensations of indulgence. Here, as elsewhere in the hunting psychosis, novelty is at a premium, for the mind is dependent upon a present or immediate stimulus to get activity going. It requires no deep scientific analysis to inform us that sex-relations are still largely in the dramatized stage; and the play of emotion which accompanies the enacting of the successive stages of the drama gives way to genuine affection and intelligent foresight only slowly through great modifications of the whole educative and economic environment. Recent writers, I think, in their interest on the institutional side of marriage (for we are going through a period of reading back Aryan legal relationships just as we formerly read back Aryan theogonies and mythologies) have overlooked the tremendous importance of the immediate play of psychic factors congruous to hunting as such.

In conclusion, let me point out that the adjustment of habits to ends, through the medium of a problematic, doubtful, precarious situation, is the structural form upon which present intelligence and emotion are built. It remains the ground-pattern. The further problem of genetic psychology is then to show how the purely immediate personal adjustment of habit to direct satisfaction, in the savage, became transformed through the introduction of impersonal, generalized objective instrumentalities and ends; how it ceased to be immediate and became loaded and surcharged with a content which forced personal want, initiative, effort and satisfaction further and further apart, putting all kinds of social divisions of labor, intermediate agencies and objective contents between them. This is the problem of the formation of mental patterns appropriate to agricultural,

military, professional and technological and trade pursuits, and the reconstruction and overlaying of the original hunting schema.

But by these various agencies we have not so much destroyed or left behind the hunting structural arrangement of mind, as we have set free its constitutive psycho-physic factors so as to make them available and interesting in all kinds of objective and idealized pursuits—the hunt for truth, beauty, virtue, wealth, social well-being, and even of heaven and of God.—JOHN DEWEY, *The Psychological Review*, 9:217–30.

THE PRIMITIVE MAN—EMOTIONAL

. . . . In the *Principles of Psychology*, § 253, we saw that "mental evolution, both intellectual and emotional, may be measured by the degree of remoteness from primitive reflex action. The formation of sudden, irreversible conclusions on the slenderest evidence, is less distant from reflex action than is the formation of deliberate and modifiable conclusions after much evidence has been collected. And similarly, the quick passage of simple emotions into the particular kinds of conduct they prompt, is less distant from reflex action than is the comparatively-hesitating passage of compound emotions into kinds of conduct determined by the joint instigation of their components."

Here, then, are our guides in studying the emotional nature of primitive man. Being less evolved, we must expect to find him deficient in these complex emotions which respond to multitudinous and remote probabilities and contingencies. His consciousness differs from that of the civilized man, by consisting more of sensations and the simple representative feelings directly associated with them, and less of the involved representative feelings. And the relatively-simple emotional consciousness thus characterized, we may expect to be consequently characterized by more of that irregularity which results when each desire as it arises discharges itself in action before counter-desires have been awakened.

On turning from these deductions to examine the facts with a view to induction, we meet difficulties like those met in the last chapter. As in size and structure, the inferior races differ from one another enough to produce some indefiniteness in our

conception of the primitive man—physical; so in their passions and sentiments, the inferior races present contrasts which obscure the essential traits of the primitive man—emotional.

This last difficulty, like the first, is indeed one that might have been anticipated. Widely-contrasted habitats, entailing widely-unlike modes of life, have necessarily caused emotional specialization as well as physical specialization. Further, the inferior varieties of men have been made to differ by the degrees and durations of social discipline they have been subject to. Referring to such unlikenesses, Mr. Wallace remarks that "there is, in fact, almost as much difference between the various races of savage as of civilized peoples."

To conceive the primitive man, therefore, as he existed when social aggregation commenced, we must generalize as well as we can this entangled and partially-conflicting evidence: led mainly by the traits common to the very lowest, and finding what guidance we may in the *à priori* conclusions set down above.

The fundamental trait of impulsiveness is not everywhere conspicuous. Taken in the mass, the aborigines of the New World seem impassive in comparison with those of the Old World: some of them, indeed, exceeding the civilized peoples of Europe in ability to control their emotions. The Dakotahs suffer with patience both physical and moral pains. The Creeks display "phlegmatic coldness and indifference." According to Bernau, the Guiana Indian, though "strong in his affections, ... is never seen to weep, but will bear the most excruciating pains and the loss of his dearest relations with apparent stoical insensibility;" and Humboldt speaks of his "resignation." Wallace comments on "the apathy of the Indian, who scarcely ever exhibits any feelings of regret on parting or of pleasure on his return." And that a character of this kind was widespread, seems implied by accounts of the ancient Mexicans, Peruvians, and peoples of Central America. Nevertheless, there are among these races traits of a contrary kind, more congruous with those of the uncivilized at large. Spite of their usually unimpassioned behaviour, the Dakotahs rise into frightful states of bloody fury when killing buffaloes; and among the phlegmatic Creeks, there are "very frequent suicides" caused by

"trifling disappointments." Some of the American indigenes, too, do not show this apathy; as, in the North, the Chinook Indian, who is said to be "a mere child, irritated by, and pleased with, a trifle;" and as, in the South, the Brazilian, of whom we read that "if a savage struck a foot against a stone, he raged over it, and bit it like a dog." Such non-impulsiveness as exists in the American races, may possibly be due to constitutional inertness. Among ourselves, there are people whose equanimity results from want of vitality: being but half alive, the emotions roused in them by irritations have less than the usual intensities. That apathy thus caused may account for this peculiarity, seems, in South America, implied by the alleged sexual coldness.

Recognizing what anomaly there may be in these facts, we find, throughout the rest of the world, a general congruity. Passing from North America to Asia, we come to the Kamschadales, who are "excitable, not to say (for men) hysterical. A light matter sent them mad, or made them commit suicide;" and we come to the Kirghiz, who are said to be "fickle and uncertain." Turning to Southern Asiatics, we find Burton asserting of the Bedouin that his valour is "fitful and uncertain." And while, of the Arabs, Denham remarks that "their common conversational intercourse appears to be a continual strife and quarrel," Palgrave says they will "chaffer half a day about a penny, while they will throw away the worth of pounds on the first asker." In Africa like traits occur. Premising that the East-African is, "like all other barbarians, a strange mixture of good and evil," Burton describes him thus: "He is at once very good-tempered and hard-hearted, combative and cautious; kind at one moment, cruel, pitiless, and violent at another; sociable and unaffectionate; superstitious and grossly irreverent; brave and cowardly; servile and oppressive; obstinate, yet fickle and fond of change; with points of honour, but without a trace of honesty in word or deed; a lover of life, yet addicted to suicide; covetous and parsimonious, yet thoughtless and improvident." With the exception of the Bechuanas, the like is true of the races further south. Thus, in the Damara, the feeling of revenge is very transient—"gives way to admiration of the oppressor." Burchell describes the Hottentots as passing from extreme lazi-

ness to extreme eagerness for action. And the Bushman is quick, generous, headstrong, vindictive—very noisy quarrels are of daily occurrence: father and son will attempt to kill each other. Of the scattered societies inhabiting the Eastern Archipelago, those in which the Malay-blood predominates, do not exhibit this trait. The Malagasy are said to have "passions never violently excited;" and the pure Malay is described as not demonstrative. The rest, however, have the ordinary variability. Among the Negritos, the Papuan is "impetuous, excitable, noisy;" the Fijians have "emotions easily roused, but transient," and "are extremely changeable in their disposition;" the Andamanese "are all frightfully passionate and revengeful;" and of the Tasmanians we read that, "like all savages, they quickly changed from smiles to tears." So, too, of the other lowest races: there are the Fuegians, who "have hasty tempers," and "are loud and furious talkers;" there are the Australians, whose impulsiveness Haygarth implies by saying that the angry Australian *jin* exceeds the European scold, and that a man remarkable for haughtiness and reserve sobbed long when his nephew was taken from him. Bearing in mind that such non-impulsiveness as is shown by the Malays occurs in a partially-civilized race, and that the lowest races, as the Andamanese, Tasmanians, Fuegians, Australians, betray impulsiveness in a very decided manner; we may safely assert it to be a trait of primitive man. What the earliest character was, is well suggested by the following vivid description of a Bushman.

Indicating his simian appearance, Lichtenstein continues: "What gives the more verity to such a comparison was the vivacity of his eyes, and the flexibility of his eyebrows, which he worked up and down with every change of countenance. Even his nostrils and the corners of his mouth, nay, his very ears, moved involuntarily, expressing his hasty transitions from eager desire to watchful distrust. . . . . When a piece of meat was given him, and half-rising he stretched out a distrustful arm to take it, he snatched it hastily, and stuck it immediately into the fire, peering around with his little keen eyes, as if fearing that some one should take it away again:—all this was done with such looks and gestures, that anyone must have been ready

by multiplying his flocks. Still, while he remains nomadic, it is difficult to supply his flocks with unfailing food when they are large, and he has increased losses from enemies and wild animals; so that the benefits of accumulation are kept within narrow limits. Only as the agricultural state is reached, and only as the tenure of land passes from the tribal form, through the family form, to the individual form, is there a widening of the sphere for the proprietary sentiment.

Distinguished by improvidence, and by deficiency of that desire to own which checks improvidence, the savage is thus debarred from experiences which develop this desire and diminish the improvidence.

Let us turn now to those emotional traits which directly affect the formation of social groups. Varieties of mankind are social in different degrees; and, further, are here tolerant of restraint and there intolerant of it. Clearly, the proportions between these two characteristics must greatly affect social unions.

Describing the Mantras, indigenes of the Malay-peninsula, père Bourien says—"liberty seems to be to them a necessity of their very existence;" "every individual lives as if there were no other person in the world but himself;" they separate if they dispute. So is it with the wild men in the interior of Borneo, "who do not associate with each other;" and whose children, when "old enough to shift for themselves, usually separate, neither one afterwards thinking of the other." A nature of this kind shows its effects in the solitary families of the wood-Veddahs, or those of the Bushmen, whom Arbousset describes as "independent and poor beyond measure, as if they had sworn to remain always free and without possessions." Of sundry races that remain in a low state, this trait is remarked; as of Brazilian Indians, who, tractable when quite young, begin to display "impatience of all restraint" at puberty; as of the Caribs, who are "impatient under the least infringement" of their independence. Among Indian Hill-tribes the savage Bhils have "a natural spirit of independence;" the Bodo and Dhimál "resist injunctions injudiciously urged, with dogged obstinacy;" and the Lepchas "undergo great privations rather than submit to oppression." This trait we meet with again among some nomadic

races. "A Bedouin," says Burckhardt, "will not submit to any command, but readily yields to persuasion;" and he is said by Palgrave to have "a high appreciation of national and personal liberty." That this moral trait is injurious during early stages of social progress, is in some cases observed by travellers, as by Earl, who says of the New Guinea people that their "impatience of control" precludes organization. Not, indeed, that absence of independence will of itself cause an opposite result. The Kamschadales exhibit "slavishness to people who use them hard," and "contempt of those who treat them with gentleness;" and while the Damaras have "no independence," they "court slavery: admiration and fear" being their only strong sentiments. A certain ratio between the feelings prompting obedience and prompting resistance, seems required. The Malays, who have evolved into several semi-civilized societies, are said to be submissive to authority; and yet each is "sensitive to . . . . any interference with the personal liberty of himself or another." Clearly, however, be the cause of subordination what it may, a relatively-subordinate nature is everywhere shown by men composing social aggregates of considerable sizes. In such semi-civilized communities as tropical Africa contains, it is conspicuous; and it characterized the peoples who formed the extinct oriental nations, as also those who formed the extinct nations of the New World.

If, as among the Mantras above named, intolerance of restraint is joined with want of sociality, there is a double obstacle to social union: a cause of dispersion is not checked by a cause of aggregation. If, as among the Todas, a man will sit inactive for hours, "seeking no companionship," he is under less temptation to tolerate restrictions than if solitude is unbearable. Clearly, the ferocious Fijian in whom, strange as it seems, "the sentiment of friendship is strongly developed," is impelled by this sentiment, as well as by his extreme loyalty, to continue in a society in which despotism based on cannibalism is without check.

Induction thus sufficiently verifies the deduction that primitive men, who, before any arts of life were developed, necessarily lived on wild food, implying wide dispersion of small numbers, were, on the one hand, not much habituated to associated life, and were, on the other hand, habituated to that uncontrolled following

of immediate desires which goes along with separateness. So that while the attractive force was small the repulsive force was great. Only as they were led into greater gregariousness by local conditions which furthered the maintenance of many persons on a small area, could there come that increase of sociality required to check unrestrained action.

Traits of the primitive nature due to presence or absence of the altruistic sentiments, remain to be glanced at. Having sympathy for their root, these must, on the hypothesis of evolution, develop in proportion as circumstances make sympathy active; that is—in proportion as they foster the domestic relations, in proportion as they conduce to sociality, and in proportion as they do not cultivate aggressiveness.

Evidence for and against this *a priori* inference is difficult to disentangle and to generalize. Many causes conspire to mislead us. We assume that there will be tolerably uniform manifestations of character in each race; but we are wrong. Both the individuals and the groups differ considerably; as in Australia, where one tribe "is decidedly quiet," and another "decidedly disorderly." We assume that the traits shown will be similar on successive occasions, which they are not: the behaviour to one traveller is unlike the behaviour to another; probably because their own behaviours are unlike. Commonly, too, the displays of character by an aboriginal race revisited, depend on the treatment received from previous visitors: being changed from friendliness to enmity by painful experiences. Thus, of Australian travellers, it is remarked that the earlier speak more favourably of the natives than the latter, and Earl says of the Java people, that those inhabiting parts little used by Europeans "are much superior in point of morality to the natives of the north coast," whose intercourse with Europeans has been greater. When, led by his experiences in the Pacific, Erskine remarks, "nor is it at all beyond the range of probability that habits of honesty and decorum may yet be forced upon the foreign trader by those whom he has hitherto been accustomed to consider as the treacherous and irreclaimable savages of the sandalwood islands;" when we learn that in Vate, the native name for a white man is a "sailing profligate;" and when we remember that

worse names are justified by recent doings in those regions; we shall understand how conflicting statements about native characters may result.

Beyond the difficulty hence arising, is the difficulty arising from that primitive impulsiveness, which itself causes a variability perplexing to one who would form a conception of the average nature. As Livingstone says of the Makololo—"It would not be difficult to make these people appear excessively good or uncommonly bad;" and the inconsistent traits above quoted from Captain Burton, imply a parallel experience. Hence we have to strike an average among manifestations naturally chaotic, which are further distorted by the varying relations to those who witness them.

We may best guide ourselves by taking, first, not the altruistic sentiments, but the feeling which habitually co-operates with them—the parental instinct, the love of the helpless. (*Prin. of Psy.*, § 532.) Of necessity the lowest human races, in common with inferior animals, have large endowments of this. Those only can survive in posterity in whom the love of offspring prompts due care of offspring; and among the savage, the self-sacrifice required is as great as among the civilized. Hence the fondness for children which even the lowest of mankind display; though, with their habitual impulsiveness, they often join with it great cruelty. The Fuegians, described as "very fond" of their children, nevertheless sell them to the Patagonians for slaves. Great love of offspring is ascribed to the New Guinea people; and yet a man will "barter one or two" with a trader for something he wants. The Australians, credited by Eyre with strong parental affection, are said to desert sick children; and Angas asserts of them that on the Murray they sometimes kill a boy to bait their hooks with his fat. Though among the Tasmanians the parental instinct is described as strong, yet they practised infanticide; and though, among the Bushmen, the rearing of offspring under great difficulties implies much devotion, yet Moffat says they "kill their children without remorse on various occasions." Omitting further proofs of parental love on the one hand, qualified on the other by examples of a violence which will slay a child for letting fall some-

thing it was carrying, we may safely say of the primitive man that his philoprogenitiveness is strong, but its action, like that of his emotions in general, irregular.

Keeping this in mind, we shall be aided in reconciling the conflicting accounts of his excessive egoism and his fellow feeling —his cruelty and his kindness. The Fuegians are affectionate towards each other; and yet in times of scarcity they kill the old women for food. Mouat, who describes the Andamanese as a merciless race, nevertheless says that the one he took to Calcutta had a "very kind and amiable character." Many and extreme cruelties are proved against the Australians. Yet Eyre testifies to their kindness, their self-sacrifice, and even their chivalry. So, too, of the Bushmen. Lichtenstein thinks that in no savage is there "so high a degree of brutal ferocity;" but Moffat was "deeply affected by the sympathy of these poor Bushmen," and Burchell says that they show to each other "hospitality and generosity often in an extraordinary degree." When we come to races higher in social state, the testimonies to good feeling are abundant. The New Caledonians are said to be "of a mild and good-natured temper;" the Tannese are "ready to do any service that lies in their power;" the New Guinea people are "good-natured," "of a mild disposition." Passing from Negritos to Malayo-Polynesians, we meet with like characteristics. The epithets applied to the Sandwich Islanders are "mild, docile;" to the Tahitians, "cheerful and good-natured;" to the Dyaks, "genial;" to the Sea-Dyaks, "sociable and amiable;" to the Javans, "mild," "cheerful and good-humoured;" to the Malays of Northern Celebes, "quiet and gentle." We have, indeed, in other cases, quite opposite descriptions. In the native Brazilians, revenge is said to be the predominant passion: a trapped animal they kill with little wounds that it may "suffer as much as possible." A leading trait ascribed to the Fijians is "intense and vengeful malignity." Galton condemns the Damaras as "worthless, thieving, and murderous," and Andersson as "unmitigated scoundrels." In some cases adjacent tribes show us these opposite natures; as among the aborigines of India. While the Bhils are reputed to be cruel, revengeful, and ready to play the assassin for a trifling recom-

pense, the Nagas are described as "good-natured and honest;" the Bodo and Dhimál as "full of amiable qualities," "honest and truthful," "totally free from arrogance, revenge, cruelty;" and of the Lepcha, Dr. Hooker says his disposition is "amiable," "peaceful and no brawler:" thus "contrasting strongly with his neighbours to the east and west."

Manifestly, then, uncivilized man, if he has but little active benevolence, is not, as often supposed, distinguished by active malevolence. Indeed, a glance over the facts tends rather to show that while wanton cruelty is not common among the least civilized, it is common among the more civilized. The sanguinary Fijians have reached a considerable social development. Burton says of the Fan that "cruelty seems to be with him a necessary of life;" and yet the Fans have advanced arts and appliances, and live in villages having, some of them four thousand inhabitants. In Dahomy, where a large population considerably organized exists, the love for bloodshed leads to frequent horrible sacrifices; and the social system of the ancient Mexicans, rooted as it was in cannabalism, and yet highly evolved in many ways, shows us that it is not the lowest races which are the most inhuman.

Help in judging the moral nature of savages is furnished by the remark of Mr. Bates, that "the goodness of these Indians, like that of most others amongst whom I lived, consisted perhaps more in the absence of active bad qualities, than in the possession of good ones; in other words, it was negative rather than positive. . . . . The good-fellowship of our Cucámas seemed to arise, not from warm sympathy, but simply from the absence of eager selfishness in small matters." And we shall derive further help in reconciling what seem contradictory traits, by observing how the dog unites great affectionateness, sociality, and even sympathy, with habitual egoism and bursts of ferocity—how he passes readily from playful friendliness to fighting, and while at one time robbing a fellow dog of his food will at another succour him in distress.

One kind of evidence, however, there is which amid all these conflicting testimonies, affords tolerably-safe guidance. The habitual behaviour to women among any people, indicates with

approximate truth, the *average* power of the altruistic sentiments; and the indication thus yielded tells against the character of the primitive man. The actions of the stronger sex to the weaker among the uncivilized are frequently brutal; and even at best the conduct is unsympathetic. That slavery of women, often joined with cruelty to them, should be normal among savages, accepted as right not by men only but by women themselves, proves that whatever occasional displays of altruism there may be, the ordinary flow of altruistic feeling is small.

A summary of these leading emotional traits must be prefaced by one which affects all the others—the fixity of habit: a trait connected with that of early arrival at maturity, added at the close of the last chapter. The primitive man is conservative in an extreme degree. Even on contrasting higher races with one another, and even on contrasting different classes in the same society, it is observable that the least developed are the most averse to change. Among the common people an improved method is difficult to introduce; and even a new kind of food is usually disliked. The uncivilized man is thus characterized in yet a greater degree. His simpler nervous system, sooner losing its plasticity, is still less able to take on a modified mode of action. Hence both an unconscious adhesion, and an avowed adhesion, to that which is established. "Because same ting do for my father, same ting do for me," say the Houssa negroes. The Creek Indians laughed at those who suggested that they should "alter their long-established customs and habits of living." Of some Africans Livingstone says—"I often presented my friends with iron spoons, and it was curious to observe how the habit of hand-eating prevailed, though they were delighted with the spoons. They lifted out a little [milk] with the utensil, then put it on the left hand, and ate it out of that." How this tendency leads to unchangeable social usages, is well shown by the Dyaks; who, as Mr. Tyler says, "marked their disgust at the innovation by levying a fine on any of their own people who should be caught chopping in the European fashion."

Recapitulating the emotional traits, severally made more marked by this relative fixity of habit, we have first to note the impulsiveness which, pervading the conduct of primitive men,

so greatly impedes co-operation. That "wavering and inconstant disposition," which commonly makes it "impossible to put any dependence on their promises," negatives that mutual trust required for social progress. Governed as he is by despotic emotions that successively depose one another, instead of by a council of the emotions shared in by all, the primitive man has an explosive, chaotic, incalculable behaviour, which makes combined action very difficult. One of the more special traits, partly resulting from this general trait, is his improvidence. Immediate desire, be it for personal gratification or for the applause which generosity brings, excludes fear of future evils; while pains and pleasures to come, not being vividly conceived, give no adequate spur to exertion: leaving a light-hearted, careless absorption in the present. Sociality, strong in the civilized man, is less strong in the savage man. Among the lowest types the groups are small, and the bonds holding their units together are relatively feeble. Along with a tendency to disruption produced by the ill-controlled passions of the individuals, there goes comparatively little of the sentiment causing cohesion. So that, among men carried from one extreme to another by gusts of feeling—men often made very irritable by hunger, which, as Livingstone remarks, "has a powerful effect on the temper"—there exists at once a smaller tendency to cohere from mutual liking, and a greater tendency to resist an authority otherwise causing cohesion. Though, before there is much sociality, there cannot be much love of approbation; yet, with a moderate progress in social grouping, there develops this simplest of the higher sentiments. The great and immediate benefits brought by the approval of fellow-savages, and the serious evils following their anger or contempt, are experiences which foster this ego-altruistic sentiment into predominance. And by it some subordination to tribal opinion is secured, and some consequent regulation of conduct, even before there arises a rudiment of political control. In social groups once permanently formed, the bond of union—here love of society, there obedience caused by awe of power, elsewhere a dread of penalties, and in most places a combination of these—may go along with a very variable amount of altruistic feeling. Though sociality fosters sympathy, yet the daily doings of the

primitive man repress sympathy. Active fellow-feeling, ever awake and ever holding egoism in check, does not characterize him; as we see conclusively shown by the treatment of women. And that highest form of altruistic sentiment distinguished by us as a sense of justice, is very little developed.

The emotional traits harmonize with those which we anticipated—a less extended and less varied correspondence with the environment, less representativeness, less remoteness from reflex action. The cardinal trait of impulsiveness implies the sudden, or approximately-reflex, passing of a single passion into the conduct it prompts; implies, by the absence of opposing feelings, that the consciousness is formed of fewer representations; and implies that the adjustment of internal actions to external actions does not take account of consequences so distant in space and time. So with the accompanying improvidence: desire goes at once to gratification; there is feeble imagination of secondary results; remote needs are not met. The love of approbation which grows as gregariousness increases, involves increased representativeness: instead of immediate results it contemplates results a stage further off; instead of actions prompted by single desires, there come actions checked and modified by secondary desires. But though the emotional nature in which this ego-altruistic sentiment becomes dominant, is made by its presence less reflex, more representative, and is adjusted to wider and more varied requirements, it is still, in these respects, below that developed emotional nature of the civilized man, marked by activity of the altruistic sentiments. Lacking these, the primitive man lacks the benevolence which adjusts conduct for the benefit of others distant in space and time, the equity which implies representation of highly complex and abstract relations among human actions, the sense of duty which curbs selfishness when there are none present to applaud.—Herbert Spencer, *Principles of Sociology*, 1:54–72 (D. Appleton & Co., 1892).

THE PRIMITIVE MAN—INTELLECTUAL

Conceptions of *general facts* being derived from experiences of particular facts and coming later, are deficient in the primitive man. Consciousness of a general truth implies more hetero-

geneous correspondence than does consciousness of any included particular truth; it implies higher representativeness, since it colligates more numerous and varied ideas; and it is more remote from reflex action—will not, indeed, of itself, excite action at all. Having no records, man, in his uncivilized state, cannot recognize long sequences. Hence *prevision of distant results,* such as is possible in a settled society having measures and written language, is impossible to him: correspondence in time comes within narrow limits. The representations include few successions of phenomena, and these not comprehensive ones. And there is but a moderate departure from the reflex life in which stimulus and act stand in immediate connexion. Ignorant of localities outside his own, the associations of ideas the primitive man forms are little liable to be changed. As experiences (multiplying in number, gathered from a wider area, and added to by those which other men record) become more heterogeneous, the narrow notions first framed are shaken and made more plastic—there comes greater *modifiability of belief.* In his relative rigidity of belief we see a smaller correspondence with an environment containing adverse facts; less of that representativeness which simultaneously grasps and averages much evidence; and a smaller divergence from those lowest actions in which impressions cause, irresistibly, the appropriate motions. Conditioned as he is, the savage lacks *abstract ideas.* Drawn from many concrete ideas, an abstract idea becomes detachable from them only as fast as their variety leads to mutual cancellings of differences, and leaves outstanding that which they have in common. This implies growth of the correspondence in range and heterogeneity; wider representation of the concretes whence the idea is abstracted; and greater remoteness from reflex action. Such abstract ideas as those of *property* and *cause,* belong to a still higher stage. For only after many special properties and many special causes have been abstracted, can there arise the re-abstracted ideas of property in general and cause in general. The conception of *uniformity* in the order of phenomena, develops simultaneously. Only along with the use of *measures* does there grow up the means of ascertaining uniformity; and only after a great accumulation of measured results

does the idea of *law* become possible. Here, again, the indices of mental evolution serve. The conception of natural order presupposes an advanced correspondence; it involves re-representativeness in a high degree; and the implied divergence from reflex action is extreme. Until the notion of uniformity has developed along with the use of measures, thought cannot have much *definiteness*. In primitive life, there is little to yield the idea of agreement; and so long as there are few experiences of exact equality between objects, or perfect conformity between statements and facts, or complete fulfilment of anticipations by results, the notion of *truth* cannot become clear. Once more our general tests answer. The conception of truth, being the conception of correspondence between Thoughts and Things, implies advance of that correspondence; it involves representations which are higher, as being better adjusted to realities; and its growth causes a decrease of the primitive credulity allied to reflex action —allied, since it shows us single suggestions producing sudden beliefs which forthwith issue in conduct. Add that only as this conception of truth advances, and therefore the correlative conception of untruth, can *scepticism* and *criticism* grow common. Lastly, such imagination as the primitive man has, small in range and heterogeneity, is *reminiscent* only, not *constructive*. An imagination which invents, shows extension of the correspondence from the region of the actual into that of the potential; implies a representativeness not limited to combinations which have been, or are, in the environment, but including non-existing combinations thereafter made to exist; and exhibits the greatest remoteness from reflex action, since the stimulus issuing in movement is unlike any that ever before acted.

And now, having enumerated these leading traits of intellectual evolution in its latter stages, as deduced from psychological principles, we are prepared to observe the significance of the facts as described by travellers.

Testimonies to the acute senses and quick perceptions of the uncivilized, are given by nearly everyone who describes them.

Lichtenstein says the vision of the Bushman is telescopic; and Barrow speaks of his "keen eye always in motion." Of Asiatics may be named the Karens, who see as far with naked

eyes as we do with opera glasses; and the inhabitants of the Siberian steppes are celebrated for their "distant and perfect sight." Of the Brazilians, Herndon writes—"The Indians have very keen senses, and see and hear things that are inaudible and invisible to us;" and the like is remarked of the Tupis. The Abipones, "like apes, are always in motion;" and Dobrizhoffer asserts that they discern things which escape "the most quick-sighted European." Respecting hearing, too, there is similar, if less abundant, evidence. All have read of the feats of North American Indians in detecting faint sounds; and the acute hearing of the Veddahs is shown by their habit of finding bees' nests by the hum.

Still more abundant are the testimonies respecting their active and minute observation. "Excellent superficial observers," is the characterization Palgrave gives of the Bedouins. Burton refers to the "high organization of the perceptive faculties" among them; and Petherick proved, by a test, their marvellous powers of tracking. In South Africa the Hottentots show astonishing quickness "in everything relating to cattle;" and Galton says the Damaras "have a wonderful faculty of recollecting any ox that they have once seen." It is the same in America. Burton, speaking of the Prairie Indians, comments on the "development of the perceptions which is produced by the constant and minute observations of a limited number of objects." Instances are given showing what exact topographers the Chippewayans are; and the like is alleged of the Dakotahs. Bates notices the extraordinary "sense of locality" of the Brazilian Indians. Concerning the Arawaks, Hillhouse says—"Where an European can discover no indication whatever, an Indian will point out the footsteps of any number of negroes, and will state the precise day on which they have passed; and if on the same day he will state the hour." A member of a Guiana tribe "will tell how many men, women, and children have passed, where a stranger could only see faint and confused marks on the path." "Here passes one who does not belong to our village," said a native of Guiana searching for tracks; and Schomburgh adds that their power "borders on the magical."

Along with this acuteness of perception there naturally goes

great skill in those actions depending on immediate guidance of perception. The Esquimaux show great dexterity in all manual works. Kolben asserts that the Hottentots are very dexterous in the use of their weapons. Of the Fuegians it is said that "their dexterity with the sling is extraordinary." The skill of the Andamanese is shown in their unerring shots with arrows at forty or fifty yards. Tongans "are great adepts in managing their canoes." The accuracy with which an Australian propels a spear with his throwing-stick, is remarkable; while all have heard of his feats with the boomerang. And from the Hill-tribes of India, the Santals may be singled out as so "very expert with the bow and arrow" that they kill birds on the wing, and knock over hares at full speed.

Recognizing some exceptions to this expertness, as among the now-extinct Tasmanians and the Veddahs of Ceylon; and observing that survival of the fittest must ever have tended to establish these traits among men whose lives from hour to hour depended on their keen senses, quick observations, and efficient uses of their weapons; we have here to note this trait as significant in its implications. For in virtue of a general antagonism between the activities of simple faculties and the activities of complex faculties, this dominance of the lower intellectual life hinders the higher intellectual life. In proportion as the mental energies go out in restless perception, they cannot go out in deliberate thought. . . . .

Among the partially-civilized races, we find imitativeness a marked trait. Everyone has heard of the ways in which Negroes, when they have opportunities, dress and swagger in grotesque mimicry of the whites. A characteristic of the New Zealanders is an aptitude for imitation. The Dyaks, too, show "love of imitation;" and of other Malayo-Polynesians the like is alleged. Mason says that "while the Karens originate nothing they show as great a capability to imitate as the Chinese." We read that the Kamschadales have a "peculiar talent of mimicking men and animals;" that the Nootka-Sound people "are very ingenious in imitating;" that the Mountain Snake Indians imitate animal sounds "to the utmost perfection." South America yields like evidence. Herndon was astonished at the mimetic powers of

the Brazilian Indians. Wilkes speaks of the Patagonians as "admirable mimics." And Dobrizhoffer joins with his remark that the Guaranis can imitate exactly, the further remark that they bungle stupidly if you leave anything to their intelligence. But it is among the lowest races that proneness to mimicry is most conspicuous. Several travellers have commented on the "extraordinary tendency to imitate" shown by the Fuegians. They will repeat with perfect correctness each word in any sentence addressed to them—mimicking the manner and attitude of the speaker. So, too, according to Mouat, the Andamanese show high imitative powers; and, like the Fuegians, repeat a question instead of answering it. Sturt gives a kindred account of the South Australians, who, he says, "evinced a strange perversity" "in repeating words" which "they knew were meant as questions."

In this imitativeness, shown least by the highest members of civilized races and most by the lowest savages, we see again the antagonism between perceptive activity and reflective activity. Among inferior gregarious creatures, as rooks that rise in a flock when one rises, or as sheep that follow a leader in leaping, we see an almost automatic repetition of actions witnessed in others; and this peculiarity, common to the lowest human types—this tendency to "ape" others, as we significantly call it—implies a smaller departure from the brute type of mind. It shows us a mental action which is, from moment to moment, chiefly determined by outer incidents; and is therefore but little determined by causes involving excursiveness of thought, imagination, and original idea.

Our conception of the primitive man—intellectual, will grow clearer when, with the above inductions, we join illustrations of his feeble grasp of thought.

Common speech fails to distinguish between mental activities of different grades. A boy is called clever who takes in simple ideas rapidly, though he may prove incapable of taking in complex ideas; and a boy is condemned as stupid because he is slow in rote-learning, though he may apprehend abstract truths more quickly than his teacher. Contrasts of this nature must be recognized, if we would interpret the conflicting evidence respecting the capacities of the uncivilized. Even of the Fuegians we read that

they "are not usually deficient in intellect;" even the Andamanese are described as "excessively quick and clever;" and the Australians are said to be as intelligent as our own peasants. But the ability thus referred to as possessed by men of the lowest types, is one for which the simpler faculties suffice; and goes along with inability when any demand is made on the complex faculties. A passage which Sir John Lubbock quotes from Mr. Sproat's account of the Ahts may be taken as descriptive of the average state: "The native mind, to an educated man, seems generally to be asleep. . . . . On his attention being fully aroused, he often shows much quickness in reply and ingenuity in argument. But a short conversation wearies him, particularly if questions are asked that require efforts of thought or memory on his part. The mind of the savage then appears to rock to and fro out of mere weakness." Spix and Martius tell us of the Brazilian Indian that "scarcely has one begun to question him about his language, when he grows impatient, complains of headache, and shows that he is unable to bear the exertion;" and according to Mr. Bates, "it is difficult to get at their notions on subjects that require a little abstract thought." When the Abipones "are unable to comprehend anything at first sight, they soon grow weary of examining it, and cry—'What is it after all?'" It is the same with Negroes. Burton says of the East Africans, "ten minutes sufficed to weary out the most intellectual" when questioned about their system of numbers. And even of so comparatively superior a race as the Malagasy, it is remarked that they "do not seem to possess the qualities of mind requisite for close and continued thought."

On observing that to frame the idea of a species, say trout, it is needful to think of the characters common to trout of different sizes, and that to conceive of fish as a class, we must imagine various kinds of fish, and see mentally the likenesses which unite them notwithstanding their unlikenesses; we perceive that, rising from the consciousness of individual objects to the consciousness of species, and again to the consciousness of genera, and orders, and classes, each further step implies more power of mentally grouping numerous things with approximate simultaneity. And perceiving this, we may understand why,

lacking the needful representativeness, the mind of the savage is soon exhausted with any thought above the simplest. Excluding those referring to individual objects, our most familiar propositions, such even as "Plants are green," or "Animals grow," are propositions never definitely framed in his consciousness; because he has no idea of a plant or an animal, apart from kind. And of course until he has become familiar with general ideas and abstract ideas of the lowest grades, those a grade higher in generality and abstractness are inconceivable by him. This will be elucidated by an illustration taken from Mr. Galton's account of the Damaras, showing how the concrete, made to serve in place of the abstract as far as possible, soon fails, and leaves the mind incapable of higher thought: "They puzzle very much after five [in counting], because no spare hand remains to grasp and secure the fingers that are required for units. Yet they seldom lose oxen; the way in which they discover the loss of one is not by the number of the herd being diminished, but by the absence of a face they know. When bartering is going on, each sheep must be paid for separately. Thus, suppose two sticks of tobacco to be the rate of exchange for one sheep, it would sorely puzzle a Damara to take two sheep and give him four sticks."

This mental state is, in another direction, exemplified by the statement of Mr. Hodgson concerning the Hill-tribes of India. "Light," he says, "is a high abstraction which none of my informants can grasp, though they readily give equivalents for sunshine and candle or fire-flame." And Spix and Martius further exemplify it when they say that it would be vain to seek in the language of the Brazilian Indians "words for the abstract ideas of plant, animal, and the still more abstract notions, colour, tone, sex, species, etc.; such a generalization of ideas is found among them only in the frequently used infinitive of the verbs to walk, to eat, to drink, to dance, to sing, to hear, etc.

Not until there is formed a general idea, by colligating many special ideas which have a common trait amid their differences—not until there follows the possibility of connecting in thought this common trait with some other trait also possessed in common, can there arise the idea of a causal relation; and not until many different causal relations have been observed, can there

result the conception of causal relation in the abstract. By the primitive man, therefore, such distinction as we make between natural and unnatural cannot be made. Just as the child, ignorant of the course of things, gives credence to an impossible fiction as readily as to a familiar fact; so the savage, similarly without classified and systematized knowledge, feels no incongruity between any absurd falsehood propounded to him and some general truth which we class as established: there being, for him, no such established general truth.

Hence his credulity. If the young Indian takes as his totem, and thereafter regards as sacred, the first animal he dreams about during a fast—if the Negro, when bent on an important undertaking, chooses for a god to help him the first object he sees on going out, and sacrifices to it and prays to it—if the Veddah, failing in a shot with his arrow, ascribes the failure not to a bad aim but to insufficient propitiation of his deity; we must regard the implied convictions as normal accompaniments of a mental state in which the organization of experiences has not gone far enough to evolve the idea of natural causation.

Absence of the idea of natural causation, implies absence of rational surprise.

Until there has been reached the belief that certain connexions in things are constant, there can be no astonishment on meeting with cases seemingly at variance with this belief. The behaviour of the uncultivated among ourselves teaches us this. Show to a rustic a remarkable experiment, such as the rise of liquid in a capillary tube, or the spontaneous boiling of warm water in an exhausted receiver, and instead of the amazement you expected he shows a vacant indifference. That which struck you with wonder when first you saw it, because apparently irreconcilable with your general ideas of physical processes, does not seem wonderful to him, because he is without those general ideas. And now if we suppose the rustic divested of what general ideas he has, and the causes of surprise thus made still fewer, we get the mental state of the primitive man.

Of the lowest races, disregard of novelties is almost uniformly alleged. According to Cook, the Fuegians showed utter indifference in presence of things that were entirely new to them.

The same voyager observed in the Australians a like peculiarity; and Dampier says those he had on board "did not notice anything else in the ship" than what they had to eat. So, too, the Tasmanians were characterized by Cook's surgeon as exhibiting no surprise. Wallis asserts of the Patagonians that they showed the most "unaccountable indifference" to everything around them on shipboard; even the looking-glass, though it afforded great diversion, excited no astonishment; and Wilkes describes like conduct. I also find it stated of the village Veddahs that two of them "showed no surprise at a looking-glass." And of the Samoiedes we read that "nothing but the looking-glasses caused any surprise in them for an instant; again a moment and this ceased to draw their attention."

Along with the absence of surprise there goes absence of curiosity; and where there is least faculty of thought, even astonishment may be excited without causing inquiry. Illustrating this trait in the Bushmen, Burchell says—"I showed them a looking-glass; at this they laughed, and stared with vacant surprise and wonder to see their own faces; but expressed not the least curiosity about it." Where curiosity exists we find it among races of not so low a grade. That of the New Caledonians was remarked by Cook; and that of the New Guinea people by Earl and by Jukes. Still more decided is an inquiring nature among the relatively-advanced Malayo-Polynesians. According to Boyle, the Dyaks have an insatiable curiosity. The Samoans, too, "are usually very inquisitive;" and the Tahitians "are remarkably curious and inquisitive."

Evidently this absence of desire for information about new things, which characterizes the lowest mental state, prevents the growth of that generalized knowledge which makes rational surprise, and consequent rational inquisitiveness, possible. If his "want of curiosity is extreme," as Mr. Bates says of the Cucáma Indian, the implication is that he "troubles himself very little concerning the causes of the natural phenomena around him." Lacking ability to think, and the accompanying desire to know, the savage is without tendency to speculate. Even when there is raised such a question as that often put by Park to the Negroes—"What became of the sun during the night, and

whether we should see the same sun, or a different one, in the morning," no reply is forthcoming. "I found that they considered the question as very childish: . . . . they had never indulged a conjecture, nor formed any hypothesis, about the matter."

The general fact thus exemplified is one quite at variance with current ideas respecting the thoughts of the primitive man. He is commonly pictured as theorizing about surrounding appearances; whereas, in fact, the need for explanations of them does not occur to him.

One more general trait must be named—I mean the lack of constructive imagination. This lack naturally goes along with a life of simple perception, of imitativeness, of concrete ideas, and of incapacity for abstract ideas.

The collection of implements and weapons arranged by General Pitt-Rivers, to show their relationships to a common original, suggests that primitive men are not to be credited with such inventiveness as even their simple appliances seem to indicate. These have arisen by small modifications; and the natural selection of such modifications has led unobtrusively to various kinds of appliances, without any distinct devising of them.

Evidence of another kind, but of like meaning, is furnished by Sir Samuel Baker's paper on the "Races of the Nile Basin," in which he points out that the huts of the respective tribes are as constant in their types as are the nests of birds: each tribe of the one, like each species of the other, having a peculiarity. The like permanent differences he says holds among their head-dresses; and he further asserts of head-dresses, as of huts, that they have diverged from one another in proportion as the languages have diverged. All which facts show us that in these races the thoughts, restrained within narrow established courses, have not the freedom required for entering into new combinations, and so initiating new modes of action and new forms of product.

Where we find ingenuity ascribed, it is to races such as the Tahitians, Javans, etc., who have risen some stages in civilization, who have considerable stocks of abstract words and ideas,

who show rational surprise and curiosity, and who thus evince higher intellectual development.

Here we come to a general truth allied to those with which, in the two foregoing chapters, I have preluded the summaries of results—the truth that the primitive intellect develops rapidly, and early reaches its limit.

In the *Principles of Psychology,* § 165, I have shown that the children of Australians, of Negroes in the United States, of Negroes on the Nile, of Andamanese, of New Zealanders, of Sandwich Islanders, are quicker than European children in acquiring simple ideas, but presently stop short from inability to grasp the complex ideas readily grasped by European children when they arrive at them. To testimonies before quoted I may add the remark of Mr. Reade, that in Equatorial Africa the children are "absurdly precocious;" the statement of Captain Burton, that "the negro child, like the East Indian, is much 'sharper' than the European . . . . at the age of puberty this precocity . . . . disappears;" and the description of the Aleuts of Alaska, who "up to a certain point are readily taught." This early cessation of development implies both low intellectual nature and a great impediment to intellectual advance; since it makes the larger part of life unmodifiable by further experiences. On reading of the East African, that he "unites the incapacity of infancy with the unpliancy of age," and of the Australians that "after twenty their mental vigour seems to decline, and at the age of forty seems nearly extinct;" we cannot fail to see how greatly this arrest of mental evolution hinders improvement where improvement is most required.

The intellectual traits of the uncivilized, thus made specially difficult to change, may now be recapitulated while observing that they are traits recurring in the children of the civilized.

Infancy shows us an absorption in sensations and perceptions akin to that which characterizes the savage. In pulling to pieces its toys, in making mud-pies, in gazing at each new thing or person, the child exhibits great tendency to observe with little tendency to reflect. There is, again, an obvious parallelism in the mimetic propensity. Children are ever dramatizing the lives of adults; and savages, along with their other mimicries, similarly

dramatize the actions of their civilized visitors. Want of power to discriminate between useless and useful facts, characterizes the juvenile mind, as it does the mind of the primitive man. This inability to select nutritive facts necessarily accompanies low development; since, until generalization has made some progress, and the habit of generalizing has become established, there cannot be reached the conception that a fact has a remote value apart from any immediate value it may have. Again, we see in the young of our own race a similar inability to concentrate the attention on anything complex or abstract. The mind of the child, as well as that of the savage, soon wanders from sheer exhaustion when generalities and involved propositions have to be dealt with. From feebleness of the higher intellectual faculties comes, in both cases, an absence, or a paucity, of ideas grasped by those faculties. The child, like the savage, has few words of even a low grade of abstractedness, and none of a higher grade. For a long time it is familiar with cat, dog, horse, cow, but has no conception of animal apart from kind; and years elapse before words ending in *ion* and *ity* occur in its vocabulary. Thus, in both cases, the very implements of developed thought are wanting. Unsupplied as its mind is with general truths, and with the conception of natural order, the civilized child when quite young, like the savage throughout life, shows but little rational surprise or rational curiosity. Something startling to the senses makes it stare vacantly, or perhaps cry; but let it see a chemical experiment, or draw its attention to the behaviour of a gyroscope, and its interest is like that shown in a common-place new toy. After a time, indeed, when the higher intellectual powers it inherits are beginning to act, and when its stage of mental development represents that of such semi-civilized races as the Malayo-Polynesians, rational surprise and rational curiosity about causes, begin to show themselves. But even then its extreme credulity, like that of the savage, shows us the result of undeveloped ideas of causation and law. Any story, however monstrous, is believed; and any explanation, however absurd, is accepted.

And here, in final elucidation of these intellectual traits of the primitive man, let me point out that, like the emotional traits,

they could not be other than they are in the absence of the conditions brought about by social evolution. In the *Principles of Psychology,* §§ 484–493, it was shown in various ways that only as societies grow, become organized, and gain stability, do there arise those experiences by assimilating which the powers of thought develop. It needs but to ask what would happen to ourselves were the whole mass of existing knowledge obliterated, and were children with nothing beyond their nursery-language left to grow up without guidance or instruction from adults, to perceive that even now the higher intellectual faculties would be almost inoperative, from lack of the materials and aids accumulated by past civilization. And seeing this, we cannot fail to see that development of the higher intellectual faculties has gone on *pari passu* with social advance, alike as cause and consequence: that the primitive man could not evolve these higher intellectual faculties in the absence of a fit environment; and that in this, as in other respects, his progress was retarded by the absence of capacities which only progress could bring.—Herbert Spencer, *Principles of Sociology,* 1:73–91.

[EDUCATION OF THE AUSTRALIAN BOY THROUGH INITIATION CEREMONIES]

. . . . As soon as we had reached the camp and the men were distributed through it, the distant roaring sound of the *Mudthis* was heard and the whole camp was instantly in commotion. The women started up, and, seizing their rugs and blankets, hastily went with their children to a vacant space on the north side of the encampment, where they re-commenced the "tooth"-song. Meanwhile the men were stalking about among the camps shouting *"Ha! Wah!"* commanding silence among the women. In a very short time these with their children were huddled together in a close group, surrounded by the men, who were stamping a dance to the word "Wah!" finally closing in round them, and silently raising their hands to the sky. This silent gesture again means *Daramulun,* whose name cannot be lawfully spoken there.

A singular feature now showed itself. There were at this time two or three Biduelli men with their wives and children in the encampment, and also one of the Krauatungalung Kurnai,

with his wife and child. When these ceremonies commenced they, with one exception, went away, because neither the Biduelli or the Krauatun Kurnai had, as I have said before, any initiation ceremonies, and these men had therefore never been "made men." The one man who remained was the old patriarch of the Biduelli, and he was now driven crouching among the women and children. The reason was self-evident; he had never been made a man, and therefore was no more than a mere boy.

The women and children being thus driven together, the old men proceeded to draw from them those boys who were considered to be ripe for initiation. The old men pointed out those who were to be taken, and their *Kabos* seized them and placed them in the front rank of the women. There was one boy, a half-caste, indeed he was nearer white than black, as to whom the old men were divided in opinion. He was in an agony of terror, clinging to his mother, but by the order of the head *Gommera* he was dragged out and discussed. After a few minutes the decision was given, "He is too young, put him back again." The women and children were now pushed together into as small a compass as possible, with the old Biduelli patriarch among them. Skin rugs and blankets were then placed over them, so that they were completely hidden, and were themselves unable to see anything. At a signal from Gunjerung, a *Kabo* seized his boy from under the covering, and holding him by one arm, ran him off to the place where the bundles were left. All of us followed as fast as possible, and as I left I could hear the muffled sound of the "tooth"-song being sung by the women under their coverings.

It was expected that there would be eight boys ready to be made men, but owing to the delays and to the non-arrival of the Kurnai contingent, there were only three who were passed by the old men. Two were about fourteen or fifteen, the other was older and had an incipient moustache.

The first proceeding at the trysting-place was that the *Kabos* placed on each boy, who had been stripped naked, a new blanket folded twice, so that when fastened down the front it formed a cone, the apex of which was over the boy's head and the base barely touched the ground. The wooden skewers with which

the sides of the blanket were fastened were so placed that the boy's face appeared just over the uppermost one. The upper fold fell over the head so as to shade the eyes and in fact most of the face.

This being all arranged, Gunjerung gave the signal to start, and our procession began to ascend the steep side of a grassy hill leading to the mountain. Some of the old men led the way, then came the three sets of *Kabos,* one on each side of a boy, holding the upper part of his arm, and in deep converse with him as they went. All the other men followed as they liked, each one carrying his bundle, and the *Kabos* carried, not only their own, but also their boys' things.

The duty of the *Kabos* is to take charge of the boys during the ceremonies. They never leave them alone, and if one of them has to absent himself for a time, he calls some other man, of the same relation to the boy as himself, to take his place. It is the duty of the *Kabo* to prepare his boy for the coming ceremony by instruction, admonition, and advice, and this commences the moment the procession moves forward. One of the earliest, if not the first, instruction is that the boy must not under any possible circumstances show any surprise or fear, and no matter what is said or done to him, he is not by word or deed to show that he is conscious of what is going on, yet that he must narrowly observe everything, and remember all he sees and hears. It is explained that everything he hears said, to which the word *"Yah"* is appended, means the exact opposite to the apparent meaning. This word was explained when we started by Umbara. He said that it was like a white man saying "I sell you;" my messenger Jenbin said it was like a white man saying "gammon." The use of the word will be seen by illustration farther on.

The intention of all that is done at this ceremony is to make a momentous change in the boy's life; the past is to be cut off from him by a gulf which he can never re-pass. His connection with his mother as her child is broken off, and he becomes henceforth attached to the men. All the sports and games of his boyhood are to be abandoned with the severance of the old domestic ties between himself and his mother and sisters. He is now to be a man, instructed in and sensible of the duties which

devolve upon him as a member of the Murring community. To do all this is partly the object of the ceremonies, and the process by which this is reached is a singular one. The ceremonies are intended to impress and terrify the boy in such a manner that the lesson may be indelible, and may govern the whole of his future life. But the intention is also to amuse in the intervals of the serious rites.

The ceremonies, therefore, are marked by what may be called major and minor stages, and the intervals are filled in by magic dances, by amusing interludes and buffoonery, in which all the men take part, excepting the *Kabos,* whose duty is to unceasingly explain and admonish during the whole ceremony; to point the moral and adorn the tale. The pieces of buffoonery are perhaps some of the most remarkable features of the proceeding. If one were to imagine all sorts of childish mischief mixed up with the cardinal sins represented in burlesque, and ironically recommended to the boys on their return to the camp and afterwards, it would give a not unapt representation of what takes place. But there is a remarkable feature that at the end of almost every sentence, indeed of every indecent, immoral, or lewd suggestion, the speaker adds *"Yah!"* which negatives all that has been said and done. Indeed the use of the word *"Yah"* runs through the whole conversation carried on during the ceremonies, as when a man in the rear of the procession calls to some one in the front, "Hallo there, you (mentioning his name), stop and come back to me—*yah!*" This gave to the whole of the proceedings, up to the time when we reached the Talmaru camp, in the recesses of the mountain, a sort of Carnival and April fool aspect.

The old men told me that the meaning of this inverted manner of speaking, of saying one thing when the speaker intended another, was to break the boys of a habit of telling lies, and to make them for the future truth-speaking.

The ceremonies are also intended to rivet the influence and power of the old men on the novices, who have heard from their earliest childhood tales of the fearful powers of the *Gommeras,* and of the *Joïas* by which they can cause sickness and death. At these ceremonies the *Joïas* are exhibited. A young man said to me after his initiation, "When I was a little boy I did not

believe all I heard about the *Joïas,* but when I saw the *Gommeras* at the *Kuringal* bringing them up from their insides, I believed it all."

These remarks will be illustrated by the incidents which I am about to describe.

At the halt made the *Kabos* placed their boys in a row, and two old men sat down before them on the ground, facing each other with their feet touching. In the oval space thus enclosed by their legs they proceeded to make a "mud pie" of the wet soil, which they smoothed and patted into the semblance of a cake, with childish manner and gestures. All the men danced round them uttering some word which I omitted to note. Several men then came to the boys and spoke to them, in their buffoon manner, pointing at the same time to the dirt cake. It fortunately happened that one of the boys was a Bemeringal, whose language differed from that of the Katungal so much that throughout the ceremonies, while the men spoke to the Katungal boys in their own language, they spoke to the Bemering boy in the broken English which is used by the blacks and whites in speaking to each other. Thus I was able to follow the whole course of instruction and admonition very satisfactorily, and also to check the explanations given me by my friends Yibai-malian and Umbara and others. The men said, "Look at that! look at those old men, when you get back to the camp go and do like that, and play with little children—Yah!"

After a march of another quarter of a mile there was another halt. Some of the old men came out of the scrub with boughs held round their heads representing a mob of bullocks, and went through some absurd antics to make the boys laugh at their child's play. But the boys, having been warned by their *Kabos,* looked on with the utmost stolidity.

From here we marched slowly up the mountain side, until at another little level a third halt was made. Here the second stage was marked by all the men rubbing themselves with powdered charcoal, making themselves almost unrecognisable. The use of powdered charcoal in this manner seems to have a very general application in these ceremonies and in other tribes to magic, as for instance the Bunjil-barn among the Kurnai.

This interlude was an amusing one. The men, led by Umbara, pretended to be a team of working bullocks. Each man held a stick by both hands over his neck to represent a yoke, and the team danced slowly among the trees, past the boys with ludicrous gestures. Thence a further march was made, the men making laughable remarks to the boys, such as "You can go home now—Yah! We are going to the sea-shore to get oysters—Yah!"

On the summit of the hill there was another halt, and here was the first magic dance. The boys and their *Kabos* stood in a row and the men danced in a circle before them, shouting the name for "legs." This kind of dance is merely jumping round in a circle, with the legs wide apart and the arms stretched straight downwards swinging across each other in front, the word being loudly uttered, rhythmically with the body movement. After doing this for a minute or two, the circle of dancers opened, and joined on to the end of the line of *Kabos* and novices, the whole then forming a new circle. One of the *Gommeras* darted into this enclosed space, and danced the magic dance. This is done as if sitting almost on the heels, but the knees are widely apart, and the two hands are extended downwards until the fingers almost touch the ground. The medicine-man then hops backwards and forwards with a staring expression of face, his head vibrates from side to side, and he suddenly shows, sometimes after apparently internal struggles, one of his *Joïas* between his teeth. This is supposed to have been brought from within himself. The other men are meantime dancing round him, and I have occasionally seen him work himself into a kind of ecstatic frenzy, and fall down, once almost into the fire, utterly exhausted. While this was going on, the *Kabos* spoke in earnest tones to their boys, explaining to them the great and deadly powers of the *Gommeras,* and the necessity of their obeying every instruction given to them.

After a further ascent of a steep mountain ridge, there was another halt before crossing the summit of the range, which was marked by the men representing to the boys a procession of old men, slowly and with rhythmical movements marching out of the forest into the little open space in which the boys had been halted. Great age was shown, as in all these representations, by

each man walking in a stooping position, supported by a staff in each hand. After circling round the boys twice, the procession resolved itself into a ring in front of the boys and the men danced the usual magic dance round one who exhibited his *Joïas* in the usual manner. The men then, ceasing to dance, rushed to the boys in an excited manner, old Yibai-malian leading the way, and for the first time went through one of their most characteristic performances. They all shouted *"Ngai!"* meaning "Good," and at the same time moved their arms and hands as if passing something from themselves to the boys, who, being instructed by the *Kabos,* moved their hands and arms as if pulling a rope towards themselves, the palms of the hands being held upwards. The intention of this is that the boys shall be completely filled—saturated, I might say—with the magic proceeding from the initiated and the medicine-men, so that *"Daramulun* will like them."

Perhaps the best expression that could be used in English would be that by their thus passing their magical influence to the boys, the medicine-men and the initiated made the novices acceptable to *Daramulun.* . . . .

The old men being ready, we went down a cattle-track to the lower glen, where a place was chosen and a space cleared for the tooth ceremony. All the bushes were chopped up, the stones gathered, and even the grass plucked up by the roots—in fact, everything cleared from it for a space of about twenty-five feet square. In a line along one side three pairs of holes were dug, about a foot in depth, in which the novices were to stand. A great stringy-bark tree was close to the northern side, and on this the Bega *Gommera* cut in relief the figure of a man of life-size in the attitude of dancing. This represented *Daramulun,* whose ceremonies they are, and who, as is taught to the novices, is cognisant of the *Kuringal* proceedings.

While some of the old men were making these preparations, other men prepared sheets of stringy bark for the dresses of the performers in the next ceremony. These dresses were prepared by cutting the bark of the tree through all round the bole in two places about three feet apart. The outer bark is then chipped off and the inner bark beaten with the back of the toma-

hawk before being separated from the tree. It is then taken off as a sheet of fibres, and being extended on the ground, is at least three times its former circumference. The sheets of fibre are about three inches thick, and look like coarse bright yellow tow. Ten men were now decorated with this fibre round their bodies, tied round their legs and arms, and placed as monstrous wigs on their heads. Their faces were further disguised by reverting the upper and lower lips by cords made of the fibre tied behind the head, thereby showing the teeth and gums, and the effect was hideous. Two pieces of bark were now stripped, each about four feet in length, by fifteen inches at one end and nine at the other. The ten men now knelt down in a row on the southern edge of the cleared space, and about six or seven feet distant from, and parallel with, the row of holes, which faced them. The kneeling men were shoulder to shoulder; the man at either end had one of the pieces of bark in his hands, and in front of him a small mound of earth raised up in such a position that he could strike it with the concave side of his piece of bark.

All being now ready, including the new bull-roarer, my messenger was sent to sound it on the mound of rocks overlooking our camp. The *Kabos* soon appeared, carefully leading their charges over the rocks and among the fallen trees, and down the cattle-track. The boys were ordered to keep their eyes fixed on their feet, and could therefore only proceed slowly, each one being guided by a *Kabo*. The remainder of the men who had remained at the camp followed them.

When the novices reached the cleared ground, still with bent heads and downcast eyes, each was placed with his feet in one pair of holes. Then they were told to raise their eyes and look, and the sight of the ten disguised figures must have been startling to them, but I could not see the slightest trace of emotion on the face of either of them.

At this time the scene was striking. Some of the men were standing at the east side of the cleared space, some on the west side, the boys and their *Kabos* being on the north, almost at the foot of the tree on which the figure, about three feet in length, of *Daramulun* was cut. In front of them were these motionless disguised figures. The *Gommera* Brupin was at a little distance

almost hidden in some scrub, and old Gunjerung, the head *Gommera,* stood apart from all as was his custom, leaning on his staff, waiting for the moment when all being ready, he would give the signal for the ceremony to commence.

At length Gunjerung raised his staff, and the kneeling man nearest to the sea, that is at the east end of the row, raised his strip of bark and brought it down on the earthen mound before him with a sound like the muffled report of a gun. Then he and all the other men surged over to the west, uttering a sound like "sh" or "ush," long drawn out. The western man now, in his turn, struck his mound with a resounding blow, and all surged back making a rumbling sound; so they went on for some little time with the regularity of clockwork. This represents the waves breaking on the land, and rushing up on the shore, and the thunder answering it from the mountains.

Gunjerung now signed with his staff, and the masked figures, springing up, rushed to the novices, and commenced to dance to the words *"Wirri-wirri-wirri,"* that is, "Quick, quick, quick." As they did this, one of the *Kabos* knelt behind his boy, with his right knee on the ground, and the boy sat on his left as a seat The other *Kabo* came behind and drew the boy's head on to his breast, having his left arm round his chest, and his right hand over the boy's eyes. The Kabo kneeling on the ground held the boy's legs, his feet being in the holes.

From behind the bushes where he had been concealed, the *Gommera* Brupin now suddenly emerged dancing, bearing in one hand a short wooden club and in the other a piece of wood about eight inches long and chisel-shaped at the end. Being the representative of *Daramulun,* he was clothed only in a complete suit of charcoal dust.

The boy's eyes being covered, he danced into the space between them and the masked men to excited shouts of *"Wirri,"* to which the other men were also dancing, and thus approached the first boy. He now handed his implements to the man nearest to him, and seizing the boy's head with his hands, applied his lower incisor to the left upper incisor of the boy, and forcibly pressed it upwards. He then, dancing all the time, placed the chisel on the tooth and struck a blow with the

mallet. This time the tooth was loosened, and I could see blood. Some of the dancing-men now came between the boy and me, so that I lost count of the blows for a few seconds. However, I counted seven, and I think that there was at least one more. The tooth then fell out of its socket, and Brupin gave it to one of the old men. The boy was then led aside by the *Kabo,* who told him that he must on no account spit out the blood, but swallow it, otherwise the wound would not heal. The stoical indifference shown by this boy, to what must have been an exquisitely painful operation, was most surprising. I watched him carefully, and he could not have shown less feeling had he been a block of wood. But as he was led away I noticed that the muscles of his legs quivered in an extraordinary manner.

The *Gommera* now danced up to the second boy, and amidst the same shouts of *"Wirri"* gave a hoist to the boy's tooth with his own, and then struck his first blow. This, however, produced a different effect on this boy, for he set up a tremendous yell and struggled violently. His outcry was, however, drowned by the cries of *"Wirri,"* and the boy's eyes being still covered, the *Gommera* again danced in from the masked figures, behind whom he had been crouching, and again struck his blow. This produced the same effect as before. The old men now said that the boy had been too much with the women, and had played too much with the little girls, thereby causing his tooth to be so firmly fixed. Yibai-malian now came forward, in his character of a great medicine-man, and first of all gave the tooth a tremendous hoist up with his lower jaw, then he put his mouth to that of the boy, who made a tremendous struggle, and got his arms free. Yibai told me afterwards that he then forced one of his *Joïas,* a quartz crystal, up against the tooth to loosen it. The boy, feeling this hard substance coming out of the medicine-man's mouth, thought, as he afterwards told his *Kabo,* that the man was going to kill him by something out of his inside. While this was going on, the men near to the boy said to him, "Now you be quiet, only a little more and it will be out."

As soon as the boy was soothed down, the *Gommera* danced in again and succeeded in getting a good blow which knocked the tooth out. He struck thirteen blows in all.

The third boy now only remained, the smallest of the three, and in his case one of his *Kabos,* a man of the Ngarigo tribe, having first of all pushed the gum back from the tooth with his finger-nail, Yibai-malian gave the tooth the regulation hoist, and the *Gommera,* dancing in, knocked the tooth out with a few blows.

The three boys, having somewhat recovered from the severe ordeal through which they had gone, were led by their *Kabos* to the tree on which the figure of *Daramulun* was cut, and were told of him and his powers, and that he lived beyond the sky and watched what the Murring did. When a man died he met him and took care of him. It was he who first made the *Kuringal,* and taught it to their fathers, and he taught them also to make weapons, and all that they know. The *Gommeras* receive their powers from him, and he gives them the *Krugullung.* He is the great *Biamban* who can do anything and go anywhere, and he gave the tribal laws to their fathers, who have handed them down from father to son until now.

As the boys were then being led away to their camp, Gunjerung stopped them, and spoke to them in a most impressive manner. Alluding to the figure of *Daramulun,* he said, "If you make anything like that when you go back to the camp, I will kill you."

When the boys were taken away, the men stripped off their bark-fibre disguises and piled them over the foot-holes. Then they all formed a ring round the cleared space, standing with their faces outwards. At a signal from Brupin they all bent forwards, and with their hands scratched leaves, sticks, rubbish, anything they could reach, towards themselves, throwing it backwards on to the heap. Then they simultaneously jumped backwards, uttering the sounds *"prr! prr! prr! wah! wah! wah!"* three times. A large quantity of rubbish being thus gathered over the sacred ground, they all turned round, and each one motioning with his outstretched hands towards the heap with the palms downwards repeated the words *"Yah! wah!"* as a final conclusion.

We all now went up to the camp, and standing by the *Talmaru* fire, the boys were invested with the man's belt. A long cord of opossum-fur string, folded a number of times, was

wound round the waist, and fastened by the end being tucked under the folds. This belt is coloured with red ochre. In front hangs the narrow kilt (*Burrain*), thrust up under it so as to hang down and preserve decency, being fastened to the belt by the two outside thongs, which are tucked once or twice under and round the belt. A *Burrain* also hangs down behind.

The novices were now covered as before with their blankets; and, being seated beside their *Kabos,* were told that, their teeth being out, nothing more would be done to them, that they were no longer boys, but were to look on and attend to all the *Kabos* told them.

The proceedings which I shall now describe continued all night, and are intended to enforce the teachings of the *Kabos,* to amuse the boys, and at the same time to securely establish the authority of the old men over them.

The magic fire was freshly built up, and the novices were told to stand up and observe. I may now mention once for all that the evening's ceremonial entertainments and proceedings were carried on alternately by the two sections of the community—the mountain Bemeringal and the sea-coast Katungal.

Dances and performances alternated, some merely to amuse, others to illustrate the magical power of the *Gommeras,* and others to enforce tribal morality, or to perpetuate tribal legends. These were all strung together by a series of buffooneries, some of them of the broadest kind, and pervaded by the inverted manner of speaking before mentioned. Jokes, which were too broad for translation, were bandied about from side to side with the inevitable *"Yah!"* attached, which implied that they were not to be taken as serious.

In all these performances the men are naked, and even towards morning, when it clouded over and a smart shower fell, only a few put on a little covering. The old men especially adhered to the rules of their fathers, so far as they could do so, in the conduct of the ceremonies and their own procedure. One old man put on nothing when it rained but a pair of boots.

The first performance was by the Bega *Gommera,* and it was a ludicrous one. It represents an old man tormented by opossums. It must be mentioned that, whenever possible, the men who repre-

sented animals were of those totems, and indeed all the animals which were represented in these performances were the totem animals of the tribe. Thus, when it is a kangaroo hunt, it is a kangaroo man who performs, and the wild-dog men hunt him. But if there are not sufficient of the necessary totems, then other men help them.

In this instance the great age of the performer was indicated, as in all other cases, by his leaning on a staff. He was occupied in chopping some animal out of a hollow log, and behind him were a number of opossums, crouching in the bushes. As he chopped, an opossum came behind him and scratched his bare leg, frightening him, to judge by the caper he cut and the yell he uttered, as he turned round and hit at it with his staff. His tormentor dodged him, and running past on all fours, lay down at the edge of the cleared space. The old man now resumed his chopping, when another opossum ran out and bit his leg, and the old man, jumping and yelling, hit at and missed him. So it went on till all the opossum men had passed from one side of the fire to the other, and were lying side by side. The performer now dropped his staff and tomahawk and rushed to the fire, where he clapped his hands, shouting the word for opossum, whereupon all the opossum men sprang up and danced round him and the fire.

The next was a magic dance to the word meaning "legs." In this the dancing of the *Gommeras* and the exhibition of their *Joïas* was a marked feature of the dance. At one time there would be only one, then others would rush into the ring, until there were four or five, once there were six, all dancing in an excited state, staring with goggle eyes, with their lips drawn back, showing their *Joïas* held between their teeth, in the firelight, for it had become dark. One man in his frenzy threw himself down on his knees, and danced on them. Others danced until, apparently overcome by their own magic, they fell down seemingly senseless. . . . .

Of the totem dances some were merely the magic dance to the name of the totem. Others were prefaced by pantomimic representations of the totem animal, bird, or reptile. Thus there was a dance to the word *Yirai-kapin,* the dog's tooth, referring to the "ravenous tooth which devours everything." It com-

menced with the life-like howling of a dingo in the forest, answered by other dogs on the other side. Then nearer, till a man ran into the firelight on all fours, with a bush stuck in his belt behind, to represent a dingo's tail. Others followed, till half a score were running round the fire, smelling each other, snarling and snapping, scratching the ground, in fact representing the actions of wild dogs, until the medicine-man leading them sprang to his feet, clapped his hands, vociferating in measured tones, *"Yirai-kapin."* While he danced, the others followed him, dancing round him, and the usual totem dance was made.

Another was the crow dance, in which men, with leaves round their heads, croaked like those birds, and then danced; the owl dance, in which they imitated the hooting of the *Takula,* owl; the lyre-bird dance, and that of the stone-plover. Finally, there was the dance of the rock-wallaby, which was pantomimic.

In this the rock-wallaby were at first concealed in the shadows to the right front of the fire, that is, looking north from where I sat. Brupin and Yibai-malian were the principal performers, the animals being represented by two or three of that totem, with other men helping them. Yibai had charge of the rock-wallaby, and Brupin tried, in a grotesque manner, to entice them from him, while talking to the former. When they ran to Brupin's side, Yibai threatened him, and they had a comic combat, as if with club and shield. So it went on till all the wallaby had been enticed from Yibai, who evinced his grief at the loss in the most comical manner. It ended with the usual dance to the word *Yalonga,* that is, rock-wallaby.

Some of the pantomimes were curious, particularly one which represented a *Gommera* curing a sick child, which was a small log which one of the old men had taken from the fire and carried in his arms to and fro, imitating the crying of a sick child. Several of the men came up and imitated the actions of a "doctor," in stroking the child with their hands, and extracting from it stones, pieces of wood, bark, and other things, as the cause of the disease. This was received with shouts of laughter from all, from the medicine-men as well as the others. The only ones who did not even smile were the utterly unmoved novices.

Another pantomime represented a number of very old men who came up, following each other, out of the forest, and circled round the fire in the usual rhythmical manner, swaying from side to side at each step, and each holding his head with both hands, one at each temple. After going round the fire several times, the chain broke up into individuals, who began tickling each other, finally falling down into a heap, screeching with laughter. Such an exhibition of childishness in venerable old greybeards was ridiculous, and this was impressed on the novices by going up to them and saying, "When you go back to the camp do like that—yah!" by this warning them not to be guilty of such childish acts in their new characters of men.

Other pantomimic representations were to impress rules of tribal morality by visible instances.

A man lay down on the ground near the fire, as if a woman asleep. The other performers were hidden by the shadows thrown by the trees beyond the fire. One man then stole out, and seeing the woman sleeping, cautiously approached, after peering all round to see if any one were near. He tried in vain to wake her, and made comic gestures which left no doubt of his intentions. Being unable to succeed, he went across and lay down at the edge of the clear space. One by one the other men came by, each fruitlessly endeavouring to waken the sleeping woman, and also making gestures showing what he intended. When all had passed the pseudo-woman, one of the *Gommeras* jumped up and commenced his dance, the disappointed suitors joining in it. This play, taken by itself, was comic, but when looked at in reference to the gestures made by the men, suggested what might happen if a savage found a solitary woman sleeping in the bush. But a remarkable commentary was applied, not only by the broad allusions made by the men looking on, addressed to the novices, and always followed by the emphatic "Yah!" but by the direct statements of Gunjerung to the boys in the coast language, and to the Wolgal boy in English, which was, "Look at me! if you do anything like that when you go back to the camp, I will kill you; by and by, when you are older, you will get a wife of your own." . . . .

These representations went on from about six in the evening

to near three o'clock in the morning. When one section had wearied themselves a short halt was called, and the boys were told, as in one instance, "You can go and lie down, we are going to sleep—yah!" The *Kabos* led them to the couch of leaves, and caused them to lie down covered by blankets. The men sat by their fires, or rolled themselves in their rugs; some smoked, some chatted, but before long, sometimes after no more than five minutes had passed, one of the leading *Gommeras* would start up, clap his hands, and rush to the Talmàru fire, shouting some word, in most cases either *"Mirambul"* (legs) or *"Katir"* (dance). The section to which he belonged then joined in, the proceedings recommenced, and the other section remained spectators.

Twice when the proceedings flagged a little, Yibai-malian made me a sign for *Mudthi,* namely, moving the forefinger of the right hand in a small circle, and I sent my messenger to the mound of rocks to sound the bull-roarer out of sight. Directly the sound was heard the whole camp, excepting the *Kabos* and novices, was in a state of excitement, the men shouting *"Huh! huh!"* and the dancing went on with renewed vigour.

The novices were thus kept in a constant state of excitement and suspense until, as I have said, at about three in the morning, when the old men danced to the word *Kair,* that is, the end, the finish. The magic fire was let burn low, the boys were laid on their couch of leaves, and all hands rolled themselves in their rugs or blankets and slept. . . . .

The three novices had now to go and live by themselves in the bush, on such food as they could catch, and which it might be lawful for them to eat. They were still under the charge of the *Kabos,* who would visit them from time to time, continue to instruct them, and see that they followed the rules laid down for them. In the case of the elder of the three, the period of probation would be shortened, because he was employed as a stock-rider on a cattle station. But in all the cases the *Gommeras* would not consent to either of them taking his place in the tribal community until they were satisfied as to his conduct. For instance, he would not be allowed to take a wife for possibly several years.

Among the things which are told to the novice by his *Kabos,* is the *Budjan,* that is his totem name. These names are not much used, and a person does not know much of the *Budjans* of others. It is the personal name which is used, not the *Budjan.* The personal name is a tribal one given to an individual in childhood, and the use of the totem name is avoided, lest an enemy might get hold of it and do him an injury by evil magic. In this there is a difference between the Yuin and other tribes, in which the totem name is used, and the personal name strictly kept secret. The rule is that during the period of probation the novice is absolutely prohibited from holding any communication with a woman, even his own mother. He must not even look at one, and this prohibition extends to the emu, for the emu is Ngalalbal, the mother of *Daramulun.*

The food restrictions in connection with these ceremonies are that the *Gumbang-ira* (raw-tooth novice) may not eat any of the following: emu, because it is Ngalalbal; any animal, *e. g.* the wombat, which burrows in the ground, and therefore reminds of the foot-holes. Such creatures as have very prominent teeth, such as the kangaroo, because they remind of the tooth itself; any animal that climbs to the tree-tops, like the koala, because it is then near to *Daramulun;* any bird that swims, because it reminds of the final washing ceremony. Other food forbidden is spiny ant-eater, common opossum, lace-lizard, snakes, eels, perch, and others.

Thus the young man during his probation is placed in an artificial state of scarcity as to food, although perhaps surrounded by plenty. Included in the forbidden is the *Budjan* of the novice, although this rule is becoming more and more disregarded in the younger generations.

The novices were told that if they eat any of the forbidden animals, the *Joïa* belonging to it would get into them and kill them. But not only is there an immaterial *Joïa* which acts magically, but also a special magical substance which belongs to each such animal. In fact, these magical substances are some of the *Joïas* which the medicine-men exhibit at the *Kuringal.* As each *Gommera* has a totem name, his *Budjan* and the magical substance belonging to it are his special *Joïas.*

It is the evil magic of the *Budjan* that in great measure commands obedience, but there is also the belief that the *Gommera* can see in dreams the actions of the novices, and punish them by *Joïa*. In the old times a novice, known to have broken the food rules after initiation, would have been killed by violence.

The strictness with which these food rules are observed by the old men affords a measure of their force in the olden times. The old man whom I have mentioned as the Wolgal singer, and who seemed to be about seventy years of age, told me, when we were speaking of these rules, that he had never eaten of the flesh of the emu. He said that he had never been free of its flesh, by some one stealthily rubbing a piece of it, or the fat, on his mouth.

When the *Gommeras* are satisfied that the youth is fit to take his place in the tribe, he is allowed to return. In one case known to me, it was between five and six months before the old men were satisfied as to this. For some reason they were dissatisfied with the novices, and after a meeting was held of the old men, some of them went out to and told the novices that they must not let the women see them stripped of their rugs for some months after coming in.

After the novice is allowed to come into the camp, and till he is permitted to marry, the *Gommeras* can order him to do things for them, and he obeys them.

The ceremonies being now completed, there remained nothing for the people to do but gradually to return to their own districts. The tooth would be carried by the *Gommera* of the place most distant from that of the youth it belonged to. He would then send or hand it to the Headman of the locality next to him, and thus it would pass from group to group of the intermarrying community which had attended the *Kuringal*. It conveys its message, which is that so-and-so has been made a man. Finally it returns to its owner.

I took on myself, as being in their eyes a "*Gommera* of the Kurnai," and as having joined in causing the *Kuringal* to be held, to carry off two of the teeth, which were fastened with grass-tree gum one to each end of a piece of twisted fibre. An old man, the father of one of the boys, begged me not to put the

teeth into my "*Joïa* bag," and Yibai, who was present, said that he would by and by fetch them back.

Some twelve months after, I was surprised by the arrival at Sale, in Gippsland, where I was then living, of the man who had acted as my messenger during the ceremonies. In the usual secret manner in which anything relating to the *Kuringal* is spoken of, he whispered to me that one of the boys had been taken ill, and that the old men feared that I had placed the teeth in my bag with *Joïas*, and had thereby caused his sickness. The old men had therefore sent him to ask me for them. I relieved his mind by showing him the teeth carefully packed in a small tin box by themselves, and sent him off with them on his return journey of some two hundred and fifty miles.

In one of the talks which I had with the old men at their *Wirri-wirri-than*, I asked them what would be done if a woman saw a *Mudthi*. The consensus of opinion was that if a woman found a *Mudthi* and showed it to a man, he would kill her. If a man showed a *Mudthi* to a woman or a child, he would be killed, and not unlikely those belonging to him also. If a woman were seen in the little *Bunan* ground, she would be killed. . . . .

The intention of the ceremonies is evidently to make the youths of the tribe worthy members of the community, according to their lights. Certain principles are impressed upon them for their guidance during life—for instance, to listen to and obey the old men; to generously share the fruits of the chase with others, especially with their kindred; not to interfere with the women of the tribe, particularly those who are related to them, nor to injure their kindred, in its widest sense, by means of evil magic. Before the novice is permitted to take his place in the community, marry, and join in its councils, he must possess those qualifications which will enable him to act for the common welfare.

As a hunter he is sent into the bush to find his own living, often for several months, and, under the prohibitions as to certain food animals which are imposed upon him, he is practically placed in a state of privation, while being possibly surrounded by plentiful but forbidden food.

The qualifications of the young men are tested in some tribes,

especially those of Southern Queensland, by a ceremonial combat in which they take part.

The extraordinary restrictive powers of the food rules, and the powerful effect of the teaching at the ceremonies, has been shown in cases known to me by the serious and even fatal effects, produced by what one must call conscience, in novices who had broken the rules and eaten of forbidden food.

All those who have had to do with the native race in its primitive state will agree with me that there are men in the tribes who have tried to live up to the standard of tribal morality, and who were faithful friends and true to their word; in fact men for whom, although savages, one must feel a kindly respect. Such men are not to be found in the later generation, which has grown up under our civilisation, and is rapidly being exterminated by it.

In the ceremonies mentioned, with few exceptions, there is a similar mode of assembling the meeting for initiation, the making of a circular earthen mound, the removal of the boys from their mothers' control, the knocking out of the tooth, the investment in some tribes of the novice with a man's attire, the formation of a new camp by the women, and the showing of the boy to his mother, with the severance of her control over him by a formal act, and finally the period of probation under severe conditions. I have elsewhere referred to the belief inculcated as to the existence of a great supernatural anthropomorphic Being, by whom the ceremonies were first instituted, and who still communicates with mankind through the medicine-men, his servants.

All this is more or less clearly shown in the ceremonies in Victoria and New South Wales, but less so in those of Queensland, where the food rules, for instance, seem to be made with the object of providing a plentiful and superior supply of food for the old men, and not, as in the before-mentioned tribes, to inculcate discipline, under which the novices are placed. Yet they also act in the same direction in making the participation in the better class of food dependent on age. Whether the rule of the Queensland tribes, or of those of New South Wales and Victoria, is the older one, is a difficult question to answer. In

my opinion the former is probably the older, for it seems to be most likely that where the old men have the power to do so, they will impose rules which favour themselves, leaving the disciplinary rule to be the secondary object.

The universality of the practice that the guardians of the novice are of the relation to him of sister's husband, or wife's brother, is clearly connected with the almost universal practice of betrothal, and exchange of sister for sister, in marriage. As, moreover, the boy is initiated by the men of the intermarrying moiety of the tribe other than his own, those men of the group from which his future wife must come are naturally suggested as his guardians and preceptors in the ceremonies. Their selection would be acceptable to both moieties, that to which the novice belongs, and that from which his wife must come. As, moreover, the relation of *Kabo,* to use the Yuin term of relationship, is not merely an individual, but a group of men, the arrangement would have the strength of numbers, and a strong kindred behind it. Thus the novice, who is taken from the protection of his own kindred during the ceremonies, is placed in that of the kindred of his future wife, whose interest it is that no harm shall come to him.

One of the causes which act strongly in producing uniformity of belief and of practice, is the fact that men come from a wide radius of country to the ceremonies, under what may be called a ceremonial armistice. The component parts of the several tribes which thus meet together are each, in their furthest limits, in contact with still more distant tribes, with whom they intermarry. I have referred to instances of a contingent from a distant locality being accompanied by people of another tribe, friendly to them, but strangers to the tribe which has convened the ceremonies. It is certain that in each contingent there will be leading men, probably medicine-men, who will take part with their fellows in the ceremonies they have come to see. When they return, they carry with them the sacred mysteries of this tribe, and will be able to introduce such new beliefs or procedure as may have recommended itself to them, and they may on their part have contributed something to those they visited. The effect of this intercourse, even if slight, must be to produce uniformity

in the procedure of the ceremonies; and the period during which this may have been going on is not to be measured in years, that is, in view of the long-continuing isolation of the Australian aborigines, from any material outside influence. The fact that the ceremonies are the same in principle, even where they vary in practice, seems to me to strongly confirm the theory which I have suggested. . . . .—A. W. Howitt, *Native Tribes of South-East Australia,* 529–641 (Macmillan, 1904).

Every Australian native, so far as is known, has in the normal condition of the tribe to pass through certain ceremonies of initiation before he is admitted to the secrets of the tribe, and is regarded as a fully developed member of it. These ceremonies vary both in their nature and number to a very large extent in different tribes. Those of the eastern and south-eastern coastal districts are entirely different from those of the central tribes, amongst whom they are more elaborate and spread over a long series of years, the first taking place at about the age of ten or twelve, whilst the final and most impressive one is not passed through until probably the native has reached the age of at least twenty-five, or it may be thirty. In the Arunta and Ilpirra tribes the ceremonies are four in number:—

(1) Painting and throwing the boy up in the air; (2) Circumcision or *Lartna;* (3) Subincision or *Arilthа;* (4) The *Engwura* or fire ceremony.

The times at which these take place and the details of the ceremonies vary to a certain extent in various parts of the tribes, which it must be remembered, occupy an area of country stretching from Charlotte Waters in the south to at least 100 miles north of Alice Springs, that is over an area measuring 300 miles north and south by at least 100 miles east and west, and comprising in the south a wide extent of upland, stony plains and sand hills, and in the north a succession of ranges running east and west, and reaching an elevation of 5,000 feet.

The first ceremony takes place when a boy is between ten and twelve years of age. The men, and in this instance the women also, assemble at a central spot near to the main camp, and the

boys who have reached the right age—the number varying from ceremony to ceremony—are taken one by one and tossed in the air several times by the men, who catch them as they fall, while the women dance round and round the group, swinging their arms and shouting loudly, *"pau, pau, pau-a-a,"* the last cry being very prolonged. This over, the boys are painted on their chests and backs, as shown in the illustration, with simple designs consisting of straight or curved bands outlined by lines of red or yellow ochre. These have not of necessity any reference to the totem of the boys. They are painted by men who stand to the boys in the relation of *Umbirna,* that is, brother of a woman whom the boy may marry. In some cases, at all events, they are copied from old rock paintings, certain of which are associated with particular totems, but the boy will not of necessity be decorated with a design of his own totem. Certain of these particular designs are described in connection with the sacred drawings. If the boy has what is called an *Unjipinna* man, then it is the latter who will draw the design upon him at the close of the ceremony of throwing up.

In all the ceremonies of initiation the youth or man has certain designs painted on his body, and in no case have they of necessity any reference to his own totem, though they are emblematic of some totem with which usually the man who does the painting is associated. These designs come under the general term of *Ilkinia,* the name applied to the designs, as a whole, which are emblematic of the totems; and so long as the boy, youth or man has one or other of these painted on him, it does not signify which. It must be remembered that the man who does the painting is usually the person who decides upon the nature of the design, and it may also be noted that in the performance of sacred ceremonies men are constantly decorated with designs of totems other than their own.

In the case of this, the first of the initiatory ceremonies, the painting of each boy is done as stated by men who stand to him in the relationship of *Umbirna,* that is, a man who is the brother of a woman of the class from which his, *i. e.* the boy's, wife must come. The design is called *Enchichichika,* and while they are

being painted the boys are told that the ceremony through which they have just passed will promote their growth to manhood, and they are also told by tribal fathers and elder brothers that in future they must not play with the women and girls, nor must they camp with them as they have hitherto done, but henceforth they must go to the camp of the men, which is known as the *Ungunja.* Up to this time they have been accustomed to go out with the women as they searched for vegetable food and the smaller animals such as lizards and rats; now they begin to accompany the men in their search for larger game, and begin also to look forward to the time when they will become fully initiated and admitted to all the secrets of the tribe, which are as yet kept hidden from them.

The ceremony of throwing up is called *Alkirakiwuma* (from *alkira* the sky, and *iwuma* to throw), and very shortly after this, sometimes even before it, the boy has his nasal septum bored through, usually by his father or paternal grandfather, and begins to wear the nose bone. This boring is practised by men and women alike, and the operation is attended by a short but interesting special ceremony, which is elsewhere described. Amongst the women the nose boring is usually done by the husband immediately after marriage, and it may be remarked in passing that in both sexes the constant wearing of the nose bone emphasises the flattening out of the lobes of the nose.

A good many years may elapse between the throwing up ceremony and the performance of the two much more important ceremonies of circumcision or *Lartna,* and that of subincision or *Ariltha.* Speaking generally, it may be said that circumcision may take place at any age after the boy has arrived at puberty.

Before the time at which the boy is thrown up in the air he is spoken of as an *Ambaquerka,* which is the term applied to a child generally, of whichever sex it may be. After the throwing up, and until the ceremony of circumcision, he is called *Ulpmerka.*

When it has been decided by the boy's elder male relatives (usually his elder brothers) that he has arrived at the proper age, preparations are made unknown to him, for the carrying out of the [*Lartna*] ceremony. These consist first of all in the gathering together of a large supply of food material for the cere-

monies are attended with the performance of what are usually spoken of as corrobborees, which last over several days. If a stranger belonging to any other group happens to be present in camp when the operation is being performed he will take part in the proceedings, but in the Arunta tribe there is usually no sending out of messengers to other groups to bring them in to the performance, as there is in the coastal tribes; nor is it usual to operate upon more than one, or at most two, novices at the same time; each boy is initiated when he is supposed to have reached the proper age, and the ceremony is controlled by the men of his own local group, who may ask any one to take part or not in it just as they feel disposed.

In the following account we will describe what took place during an actual ceremony, which was conducted recently by a group of natives associated with a spot called Undiara, one of the most important centres of the kangaroo totem situated near to the Finke River. It must always be remembered that the details of these initiation ceremonies vary to a certain extent according to the locality in which they are performed; thus at Undiara the men of the kangaroo totem directed the proceedings, and therefore sacred ceremonies concerned with this particular totem were much in evidence; had Undiara been an emu locality then emu ceremonies would have predominated. Bearing this in mind, the ceremony now to be described may be regarded as typical of the rite of circumcision as carried out by the natives living along the Finke River, who are often spoken of as Larapinta blacks to distinguish them from other groups, Larapinta being the native name of the river.

The boy was seized early in the evening at the *Ungunja*, or men's camp, by three young men who were respectively *Okilia*, *Umbirna* and *Unkulla* to him. As soon as they laid hands on him they shouted loudly, *"Utchai, utchai,"* while being frightened, he struggled, trying to get free from them. He was at once carried off bodily to the ceremonial ground which had been carefully prepared at some distance from and out of sight of the main camp, so that the women, when at the latter, could not see anything of what was taking place at the former, which is called the *Apulla*. A path about five feet wide is cleared of grass and

shrubs, and the surface soil is heaped up on either side, so as to form a low, narrow bank of the same length as the path, which is some forty or fifty feet in length, and always made so as to run east and west. At a distance of about forty feet from the eastern end was a brake of boughs at which the men were assembled [and behind which the women were grouped].

Once on the ground, and in the presence of all the men and women, the boy made no further resistance, but apparently resigned himself to his fate. He was taken to the men and sat down amongst them, while the women, who had been awaiting his arrival, at once began to dance, carrying shields in their hands. The reason assigned for this is that in the Alcheringa certain women called *Unthippa* carried along with them as they travelled over the country a number of young boys who were just being initiated. As they travelled along, dancing the whole way, they also carried shields: and therefore it is that, at the present day, the initiation ceremony must commence with an imitation of the *Unthippa* dance of the Alcheringa. Except in connection with this ceremony women may never carry shields, which are exclusively the property of the men, just as much as the digging-stick is the peculiar property of a woman. While the women were dancing the men sang of the marching of the *Unthippa* women across the country. After the boy had watched and listened for some time, an *Unkulla* man came up and twined round and round his hair strands of fur string, until it looked as if his head were enclosed in a tight-fitting skull cap. Then a man who was *Gammona* to him came up and fastened round his waist a large *Uliara,* that is, the human hair girdle worn by the men, the girdle being provided by an *Oknia* of the boy. The two first-named men were respectively the brother of the boy's mother and the son of this man, the *Oknia* being a tribal brother of the boy's father who was dead, as also was the actual mother. After this a council of the *Oknia* and *Okilia* of the novice was held, and three men, who were respectively *Mura, Gammona* and *Chimmia,* were told off to take the boy away and paint him. These men are afterward called *Wulya,* or *Uwilia,* by the boy. They first of all went away and built a second brake of bushes at the western end of the *Apulla,* at a distance of about forty

feet from the end of the cleared path, so that in position the second brake corresponded to the first one at the opposite end. This was henceforth to be the brake behind which the boy had to remain except when brought on to the ground to witness performances. When this had been made the three men returned and led the boy through the dancing women to his brake, where, with great deliberation, they rubbed him all over with grease, and then decorated his body with pinkish-white clay and bird's down.

During all the proceedings every detail, such as the appointing of the various officials, was determined upon by a council of men consisting of the *Oknia* (tribal fathers) and *Okilia* (blood and tribal elder brothers) of the novice, and of this council the elder *Oknia* was head man.

After painting him, the *Uwilia* told the boy that he was now no longer an *Ulpmerka* but a *Wurtja,* that during the proceedings about to follow he must render implicit obedience, and on no account must he ever tell any woman or boy anything of what he was about to see. Should he ever reveal any of the secrets, then he and his nearest relations would surely die. He must not speak unless spoken to, and even then his words must be as few as possible, and spoken in a low tone. He was further told to remain crouched down behind his brake when left there, and that on no account must he make the slightest attempt to see what the men at their brake were doing. Should he try to see what was going on at the *Apulla,* except when taken there and told to watch, some great calamity would happen to him—*Twanyikira,* the great spirit whose voice was heard when the bull-roarers spoke, would carry him away. When these instructions had been given to him by the *Uwilia* they went away, and he was then visited by his *Okilia,* who repeated precisely the same instructions, and after this the *Wurtja* was left for an hour or two to his own reflections. Meanwhile a man had been appointed to act as *Urinthantima,* whose duty will be seen shortly, and until daylight dawned the dancing and singing went on with astonishing vigour. Then one of the *Okilia* went and brought back the *Wurtja,* passing with him as before through the middle of the dancing women, who opened out to allow them to pass

through, and placed him sitting on the lap of the *Urinthantima* man.

The oldest *Mia* woman of the boy (his actual *Mia* or mother being dead) had brought with her from her own camp a fire-stick, which she had been careful to keep alight all night. At daylight she lit a fire by means of this, and then took two long sticks with which she had provided herself, and lighting them at the fire, went and sat down, holding them in her hands, immediately behind the *Urinthantima* man. The *Uwinna*, that is the sisters of the boy's father, went and also sat down along with her. Then as the men began to sing a special fire song, she handed one of the fire-sticks to the woman who was the *Mura tualcha* of the boy, that is the woman whose eldest daughter, born or unborn, has been assigned to the *Wurtja* as his future wife, so that she is potentially his mother-in-law. While the singing went on this woman approached the boy, and, after tying round his neck bands of fur string, she handed to him the fire-stick, telling him as she did so to always hold fast to his own fire—in other words not to interfere with women assigned to other men. After this, at a signal from an old *Okilia*, the *Wurtja* got up and ran away, followed by a number of shouting boys, who after a short time returned, and, along with the women, left the *Apulla* ground and ran back to the main camp. The old *Mia* took her fire-stick with her, and in camp guarded it with great care, fixing it at an angle into the ground so as to catch the wind and ensure its being kept alight. The *Wurtja* had, whilst in his camp, to guard his fire-stick in just the same way, and was cautioned that if he lost it, or allowed it to go out, both he and his *Mia* would be killed by *Kurdaitcha*. On the day on which he was taken back to the camp, they both threw away their fire-sticks.

When the *Wurtja* left the *Apulla*, he was accompanied by some *Okilia* and *Unkulla* men who remained out in the bush with him for three days. During this time nothing of any special nature happened to him beyond the fact that he might not speak unless he was first spoken to, which seldom took place, and that he might not eat freely, though as yet he was not bound by the restrictions with regard to food which he would shortly have to obey. The main object of this partial seclusion is to

impress him with the fact that he is about to enter the ranks of the men, and to mark the break between his old life and the new one; he has no precise knowledge of what is in store for him, and the sense that something out of the ordinary is about to happen to him—something moreover which is of a more or less mysterious nature—helps to impress him strongly with a feeling of the deep importance of compliance with tribal rules, and further still with a strong sense of the superiority of the older men who know, and are familiar with, all the mysterious rites, some of which he is about to learn the meaning of for the first time.

On the fourth day the *Wurtja* was brought back, and at once placed behind his brake, which is called *Atnumbanta,* and from which he might not move without the permission of one of the *Okilia* who had been told off to guard him, and whose father was the *Oknia* who acted as the head man of the council. On the night of the fourth day the men sang of the marchings of the men of the Ullakuppera (little hawk) totem in the Alcheringa, and of their operations with their famous *Lialira* or stone knives. It was these men who, according to tradition, first introduced the use of a stone knife at circumcision, the operation having been previously conducted by means of a fire-stick. At times they broke into the *Lartna* song:

Irri yulta yulta rai
Ul katchera ul katchar-rai,

which is always sung in loud fierce tones. About midnight two *Okilia* went to the *Wurtja's* brake, and having put a bandage round his eyes led him to the men who sat as usual on the side of their brake facing towards the *Apulla.* Here he was placed lying face downwards, until two men who were going to perform a ceremony were in position between the *Apulla* lines. The Quabara, which they were about to perform, was one of a certain number which are only performed at a time such as this, though in all important respects these Quabara are identical with those performed during various ceremonies concerned with the totems. When the boy was told by his *Okilia* and *Oknia* to sit up and look he saw, lying in front of him, and on his side, a decorated man whom the *Okilia* and *Oknia,* both of them speaking at once, told him represented a wild dog. At the other end of the *Apulla* a

decorated man stood, with legs wide apart, holding up twigs of Eucalyptus in each hand, and having his head ornamented with a small *Waninga,* which is a sacred object emblematic of some totemic animal, in this particular case a kangaroo. This man moved his head from side to side, as if looking for something, and every now and then uttered a sound similar to that made by a kangaroo, which animal he was supposed to represent. Suddenly the dog looked up, saw the kangaroo, began barking, and, running along on all fours, passed between the man's legs and lay down behind the man, who kept watching him over his shoulder. Then the dog ran again between the kangaroo-man's legs, but this time he was caught and well shaken, and a pretence was made of dashing his head against the ground, whereupon he howled as if in pain. These movements were repeated several times, and finally the dog was supposed to be killed by the kangaroo. After a short pause the dog ran along on all fours to where the *Wurtja* sat and laid himself on top of the boy, then the old kangaroo hopped along and got on top of both of them, so that the *Wurtja* had to bear the weight of the two men for about two minutes. When the performers got up, the *Wurtja,* still lying down, was told by the old men that the Quabara represented an incident which took place in the Alcheringa, when a wild dog-man attacked a kangaroo-man, and was killed by the latter. The article which the kangaroo wore on its head was a *Waninga,* which was a sacred object, and must never be mentioned in the hearing of women and children; it belonged to the kangaroo totem, and was indeed the representative of a kangaroo. When all had been explained to him, he was led back to his brake, and the men continued singing at intervals all night long.

The Quabara, which are performed at these initiation ceremonies, vary according to the locality in which they are being performed, and the men who are taking the leading part in them. If, for example, the old man who is presiding belongs to the emu totem, then the Quabara will at all events to a certain, and probably a large extent, deal with incidents concerned with ancestral emu men. In the particular ceremony upon which this account is based, the old man presiding belonged to the kangaroo

totem, and therefore Quabara belonging especially to this totem were much in evidence. The totem of the novice has no influence whatever on the nature of the particular Quabara performed. Each old man who presides over, or takes the leading part in, a ceremony such as this has possession of a certain number of Quabara, and naturally those performed are chosen from this series as they are the ones which he has the right to perform. It is necessary also to remember that ceremonial objects, such as the *Waninga,* which figure largely in some districts, are unknown in others where their place is taken by entirely different objects. Thus, for example, in the northern part of the Arunta and in the Ilpirra tribe, a sacred pole called a *Nurtunja* is used, and in these parts this has precisely the significance of the *Waninga,* which is never met with in the northern districts, just as the *Nurtunja* is never met with in the south.

On the fifth day, in the afternoon, another performance in which two kangaroos and one dog figured was given. The kangaroos wore, as before, small *Waninga* in their hair, and this time carried between their teeth, and also in their hair, bunches of wooden shavings soaked in blood, which were supposed to represent wounds received from the bites of the dogs. The performance was essentially similar to that of the previous day, and the antics of the dog as he ran round and looked up, barking at the kangaroo or howled lustily as his head was bumped against the ground brought smiles to every face except that of the *Wurtja.* Finally the dog ran along and got on top of the *Wurtja,* and then the two kangaroos followed, so that this time the boy had three men on top of him. When all was over he was once more instructed, cautioned, and taken back to his brake.

On the sixth day the *Wurtja* was taken out hunting by *Okilia* and *Umbirna* men, and the night was spent in singing with little intermission songs which referred to the wanderings of certain of the Alcheringa ancestors, to which the *Wurtja,* sitting quietly at the men's brake, listened.

It must be remembered that it is now for the first time that the *Wurtja* hears anything of these traditions and sees the ceremonies performed, in which the ancestors of the tribe are represented as they were, and acting as they did during life. In

various accounts of initiation ceremonies of the Australian tribes, as, for example, in the earliest one ever published—the one written by Collins in 1804—we meet with descriptions of performances in which different animals are represented, but except in the case of the Arunta tribe, no indication of the meaning and signification of these performances has been forthcoming beyond the fact that they are associated with the totems. In the Arunta and Ilpirra tribes they are not only intimately associated with the totemic system, but have a very definite meaning. Whether they have a similar significance in other tribes we have as yet no definite evidence to show, but it is at all events worthy of note that whilst the actual initiation rite varies from tribe to tribe, consisting in some in the knocking out of teeth, and in others in circumcision, &c., in all, or nearly all, an important part of the ceremony consists in showing to the novices certain dances, the important and common feature of which is that they represent the actions of special totemic animals. In the Arunta tribe, however, they have a very definite meaning. At the first glance it looks much as if all that they were intended to represent were the behaviour of certain animals, but in reality they have a much deeper meaning, for each performer represents an ancestral individual who lived in the Alcheringa. He was a member of a group of individuals, all of whom, just like himself, were the direct descendants or transformations of the animals, the names of which they bore. It is as a reincarnation of the never-dying spirit part of one of these semi-animal ancestors that every member of the tribe is born, and, therefore, when born he, or she, bears of necessity the name of the animal or plant of which the Alcheringa ancestor was a transformation or descendant.

The nature of these performances may be gathered from one which was performed on the next—the seventh day. As usual in all these ceremonies, the body of the performer was decorated with ochre, and lines of birds' down, which were supposed to be arranged in just the same way as they had been on the body of the Alcheringa man. From his waist was suspended a ball of fur string, which was supposed to represent the scrotum of the kangaroo, and when all was ready the performer came hopping leisurely out from behind the men's brake, where he had been

decorated, lying down every now and then on his side to rest as a kangaroo does. The boy had, as usual, been brought blindfolded on to the ground, and at first was made to lie flat down. When the performer hopped out he was told to get up and watch. For about ten minutes the performer went through the characteristic movements of the animal, acting the part very cleverly, while the men sitting round the *Wurtja* sang of the wanderings of the kangaroo in the Alcheringa. Then after a final and very leisurely hop round the *Apulla* ground the man came and lay down on top of the *Wurtja,* who was then instructed in the tradition to which the performance refers. He was told that in the Alcheringa a party of kangaroo men started from a place called Ultainta, away out to the east of what is now called Charlotte Waters, and that after wandering about they came to a spot called Karinga (in the Edith Range about thirty miles south-west of Alice Springs), where one of the party who was named Unburtcha died; that is, his body died, but the spirit part of him was in a sacred Churinga, which he carried and did not die, but remained behind along with the Churinga when the party travelled on. This spirit, the old men told him, went, at a later time, into a woman, and was born again as a Purula man, whose name was, of course, Unburtcha, and who was a kangaroo man just as his ancestor was. He was told that the old men know all about these matters, and decide who has come to life again in the form of a man or woman. Sometimes the spirit child which goes into a woman is associated with one of the sacred Churinga, numbers of which every Alcheringa individual carried about with him or her (for in those days the women were allowed to carry them just as the men were), and then, in this case, the child has no definite name, but of course it belongs to the same totem as did the individual who had carried the Churinga about in the Alcheringa; that is, if it were a kangaroo man or woman, so of course must the child be, and then the old men determine what shall be its secret or sacred name.

It is in this way that the boy during the initiation ceremonies is instructed, for the first time, in any of the sacred matters referring to the totems, and it is by means of the performances which are concerned with certain animals, or rather, apparently

with the animals, but in reality with Alcheringa individuals who were the direct transformations of such animals, that the traditions dealing with this subject, which is of the greatest importance in the eyes of the natives, are firmly impressed upon the mind of the novice, to whom everything which he sees and hears is new and surrounded with an air of mystery. . . . .

The Engwura, or, as it is called in some parts of the tribe, Urumpilla, is in reality a long series of ceremonies concerned with the totems, and terminating in what may be best described as ordeals by fire, which form the last of the initiatory ceremonies. After the native has passed through these he becomes what is called *Urliara,* that is, a perfectly developed member of the tribe. We cannot fully translate the meaning of either term, but each of them is formed, in part, of the word *ura,* which means fire. The natives themselves say that the ceremony has the effect of strengthening all who pass through it. It imparts courage and wisdom, makes the men more kindly natured and less apt to quarrel; in short, it makes them *ertwa murra oknirra,* words which respectively mean "man, good, great or very," the word good being, of course, used with the meaning attached to it by the native. Evidently the main objects of it are, firstly, to bring the young men under the control of the old men, whose commands they have to obey implicitly; secondly, to teach them habits of self-restraint and hardihood; and thirdly, to show to the younger men who have arrived at mature age, the sacred secrets of the tribe which are concerned with the Churinga and the totems with which they are associated.

The Engwura may be performed in various places, but, as it is a ceremony at which men and women gather together from all parts of the tribe, and sometimes also from other tribes, a central position is preferred if it be intended to carry it out on a large scale. It is, indeed, a time when the old men from all parts of the tribe come together and discuss matters. Councils of the elder men are held day by day, by which we do not mean that there is anything of a strictly formal nature, but that constantly groups of the elder men may be seen discussing matters of tribal interest; all the old traditions of the tribe are repeated and discussed, and it is by means of meetings such as this, that

a knowledge of the unwritten history of the tribe and of its leading members is passed on from generation to generation. Not only this, but while the main effect is undoubtedly to preserve custom, yet on the other hand, changes introduced in one part of the tribe (and, despite the great conservatism of the native such changes do take place) can by means of these gatherings, become generally adopted in much less time than would be the case if they had to slowly filter through, as it were, from one locality to another.

Some idea of the importance of the ceremony may be gathered from the fact that the one which we witnessed commenced in the middle of September, and continued till the middle of the succeeding January, during which time there was a constant succession of ceremonies, not a day passing without one, while there were sometimes as many as five or six within the twenty-four hours. They were held at various hours, always one or more during the daylight, and not infrequently one or two during the night, a favourite time being just before sunrise. . . . .

For the purpose of making things clear we may briefly refer again to the constitution of the tribe. The whole area over which it extends is divided up into a large number of localities, each of which is owned and inhabited by a local group of individuals, and each such locality is identified with some particular totem which gives its name to the members of the local group. The term used by the native, which is here translated by the word totem, is *Oknanikilla.* If you ask a man what is his *Oknanikilla* he will reply Erlia (emu), Unchichera (frog), Achilpa (wild-cat), &c., as the case may be.

Special men of the Alcheringa are associated with special localities in which they become changed into spirit individuals, each associated with a Churinga, and with each locality are associated also certain ceremonies which in the Alcheringa were performed by these individuals, and have been handed down from that time to the present. Each local group has also, as already described, its own *Ertnatulunga,* or sacred storehouse, in which the Churinga are kept. The men assembled at the Engwura represented various local totem groups, and they—that is,

the older men of each group—had brought with them numbers of the Churinga from the storehouses.

Each totem has its own ceremonies, and each of the latter may be regarded as the property of some special individual who has received it by right of inheritance from its previous owner, such as a father or elder brother, or he may have, in the case of the men who are supposed to possess the faculty of seeing and holding intercourse with the *Iruntarinia* or spirits, received it as a gift directly from the latter, who have at some time, so he tells his fellows, performed it for his benefit and then presented it to him. This means either that he has had a dream during which he has seen a ceremony acted, which is quite as real a thing to him as actually seeing it when awake, or that being of a more original and ingenious turn of mind than his fellows—as the men skilled in magic certainly are—he has invented it for himself and has then told the others, who implicitly believe in his supernatural powers, that the spirits have presented it to him.[1]

Each ceremony, further, is not only connected with some totem, but with a particular local group of the totem, and its name indicates the fact. Thus we have the Quabara Unjiamba of Ooraminna, which is a performance connected with the Unjiamba or Hakea flower totem of a place called Ooraminna, the Quabara Ulpmerka of Quiurnpa, which is a ceremony concerned with certain *Ulpmerka,* or uncircumcised men of the plum tree totem of a place called Quiurnpa, and so on.

Naturally the ceremonies performed at any Engwura depend upon the men who are present—that is, if at one Engwura special totems are better represented than others, then the ceremonies connected with them will preponderate. There does not appear to be anything like a special series which must of necessity be performed, and the whole programme is arranged, so to speak, by the leading man, whose decision is final, but who frequently consults with certain of the other older men. He invites the own-

[1] Attention may be drawn to the fact that in the Arunta tribe the men who are supposed to be able to hold intercourse with the spirits and to receive these ceremonies from them are quite distinct from those usually called "medicine-men," and that both the former and the latter are characteristically the reverse of nervous or excitable in temperament.

ers of different ceremonies to perform them, but without his sanction and initiation nothing is done. Very often the performance is limited to one or perhaps two men, but in others a larger number may take part, the largest number which we saw being eleven. The man to whom the performance belongs may either take part in it himself, or, not infrequently, he may invite some one else to perform it, this being looked upon as a distinct compliment. The performer, or performers, need not of necessity belong to the totem with which the ceremony is concerned, nor need they of necessity belong to the same moiety of the tribe to which the owner does. In some cases while preparations are being made for the ceremony only the members of one moiety will be present, but very often there is no such restriction as this. In many instances those who are present during the preparation are the men who belong to the district with which the ceremony is associated. Frequently we noticed, for example, that the men from a southern locality would be associated in preparing for a ceremony connected with a southern locality, and, in the same way, men from the north would be present during the preparations for a ceremony concerned with a northern locality.

Not infrequently two performances would be prepared simultaneously, and when this was so one of them would be a ceremony concerned with Panunga and Bulthara men and the other with Purula and Kumara men. Under these circumstances one group would consist of the one moiety and the other of the other moiety, and they would be separated by some little distance and so placed in the bed of the creek that they could not see one another.

Speaking generally, it may be said that every man who was a member of the special totem with which any given ceremony was concerned would have the right of being present during the preparation, but no one else would come near except by special invitation of the individual to whom it belonged, and he could invite any one belonging to any class or totem to be present or to take part in the performance. The mixture of men of all groups is to be associated with the fact that the Engwura is an occasion on which members of all divisions of the tribe and of all totems are gathered together, and one of the main objects of which is the handing on to the younger men of the knowledge carefully

treasured up by the older men of the past history of the tribe so far as it is concerned with the totems and the Churinga.

On this occasion everything was under the immediate control of one special old man, who was a perfect repository of tribal lore. Without apparently any trouble or the slightest hitch he governed the whole camp, comprising more than a hundred full-grown natives, who were taking part in the ceremony. Whilst the final decision on all points lay in his hands, there was what we used to call the "cabinet," consisting of this old man and three of the elders, who often met together to discuss matters. Frequently the leader would get up from the men amongst whom he was sitting, and apparently without a word being spoken or any sign made, the other three would rise and follow him one after the other, walking away to a secluded spot in the bed of the creek. Here they would gravely discuss matters concerned with the ceremonies to be performed, and then the leader would give his orders and everything would work with perfect regularity and smoothness. The effect on the younger men was naturally to heighten their respect for the old men and to bring them under the control of the latter. With the advent of the white man on the scene and the consequent breaking down of old customs, such a beneficial control exercised by the elder over the younger men rapidly becomes lost, and the native as rapidly degenerates. On the one hand the younger men do not take the interest in the tribal customs which their fathers did before them, and on the other the old men will not reveal tribal secrets to the young men unless they show themselves worthy of receiving such knowledge.

After these few general remarks we may pass on to describe more in detail certain of the ceremonies which will serve to illustrate the long series.

The first phase of the proceedings was opened by the Alice Springs natives performing the *Atnimokita* corrobboree, which occupied ten evenings. As a mark of respect and courtesy it was decided by the Alatunja of the group, after, as usual, consultation with the older men, that this corrobboree should be handed over in a short time to the man who took the leading part in the Engwura and who belonged to a more southern group. When once this handing over has taken place, it will never again

be performed at Alice Springs. As soon as the *Atnimokita* performance was concluded, another called the *Illyonpa* was commenced, and this also occupied ten nights. Two days after it had begun the old leader of the Engwura went down to the ground which had been chosen—the corrobborees mentioned taking place at a separate spot visited by men and women alike—and digging up the loose, sandy soil he made a low mound called the *Parra,* measuring about thirty feet in length, two feet in width and one foot in height. It was ornamented with a row of small gum tree boughs, which were fixed one after the other along the length of the mound, and is said to represent a tract of country, but, despite long inquiry, we have not been able to find out what is the exact meaning of the word *Parra.* All that the men could tell us was that it had always been made so during the Engwura—their fathers had made it and therefore they did—and that it was always made to run north and south, because in the Alcheringa the wild cat people marched in that direction. On the level flat to the western side of this *Parra* the sacred ceremonies forthwith began to be performed.

When the *Illyonpa* corrobboree had come to an end, no more ordinary dancing festivals were held until the close of the whole proceedings some three months later. From this time onwards, and until the last act of the Engwura is performed the younger men who are passing through the ceremony must separate themselves completely from the women, and are entirely under the control of the older men. They must obey the latter implicitly. Their days are spent either in hunting, so as to secure food, the greater part of which is supposed to be brought in to the older men who remain in camp, or in watching the ceremonies, or in taking part in them under the guidance of the old men, and their nights are spent on, or close to, the Engwura ground.

With the opening of the second phase, the performance of the sacred ceremonies concerned with the totems began in earnest, and as descriptive of this, we may relate what took place during the last eight days of the five weeks which it occupied.

About ten o'clock on the morning of the first day it was decided to perform a ceremony called the Quabara Unjiamba of Ooraminna. This is concerned with certain women of the Unji-

amba or Hakea totem, who in the Alcheringa came down from the north and marched southwards as far as a spot called Ooraminna, about twenty-five miles to the south of Alice Springs. The head men of the local group is the owner of this ceremony, and together with six Purula men and one Panunga man, he repaired to the bed of the small creek, where they all sat down under the shade of a small gum tree. The other men remained in various places round about the Engwura ground, but no one came near to the place where the preparations were being made.

On occasions such as this every man carries about with him a small wallet, which contains the few odds and ends needed for decoration in the performance of the various ceremonies. The wallet consists of a piece of the skin of some animal, such as one of the smaller marsupials, with the fur left on, or else some flat strips of a flexible bark tied round with fur string are used. In one of these wallets will be found a tuft or two of eagle-hawk and emu feathers, bunches of the tail feathers of the black cockatoo, some porcupine-grass resin, pieces of red and yellow ochre and white pipe-clay, an odd flint or two, balls of human hair and opossum fur string, a tuft or two of the tail tips of the rabbit-kangaroo, and not least, a dried crop of the eagle-hawk filled with down.

The men squat on the ground, and their wallets are leisurely opened out. There is no such thing as haste amongst the Australian natives. On this occasion the owner of the Quabara had asked his younger brother to perform the principal part in the ceremony. He was a Purula man of the Hakea totem, and he had also invited another man who was a Panunga of the Achilpa or wild cat totem, to assist in the performance. The reason why the latter man was asked, though he belonged neither to the same moiety nor totem as those to which the owner of the ceremony did, was simply that his daughter had been assigned as wife to the owner's son, and therefore it was desired to pay him some compliment. After some preliminary conversation, carried on in whispers, which had reference to the ceremony, the performers being instructed in their parts, and also in what the performance represented, a long spear was laid on the ground. One or two of the men went out and gathered a number of long

grass stalks in which the spear was swathed, except about a foot at the lower end which was left uncovered. Then each man present took off his hair waist-girdle and these were wound round and round until spear and grass stalks were completely enclosed, and a long pole, about six inches in diameter and about eight feet in length, was formed. Then to the top of it was fixed a bunch of eagle-hawk and emu feathers. When this had been done one of the men by means of a sharp bit of flint—a splinter of glass, if obtainable, is preferred—cut open a vein in his arm, which he had previously bound tightly round with hair string in the region of the biceps. The blood spurted out in a thin stream and was caught in the hollow of a shield, until about half a pint had been drawn, when the string was unwound from the arm and a finger held on the slight wound until the bleeding ceased. Then the down was opened out and some of it was mixed with red ochre which had been ground to powder on a flat stone. Four of the Purula men then began to decorate the pole with alternate rings of red and white down. Each of them took a short twig, bound a little fur string round one end, dipped the brush thus made into the blood, and then smeared this on over the place where the down was to be fixed on. The blood on congealing formed an excellent adhesive material. All the time that this was taking place, the men sang a monotonous chant, the words of which were merely a constant repetition of some such simple refrain as, "Paint it around with rings and rings," "the *Nurtunja* of the Alcheringa," "paint the *Nurtunja* with rings." Every now and again they burst out into loud singing, starting on a high note and gradually descending, the singing dying away as the notes got lower and lower, producing the effect of music dying away in the distance. Whilst some of the men were busy with the *Nurtunja,* the Panunga man taking no part in the work beyond joining in the singing, another Purula man was occupied in fixing lines of down across six Churinga, which had been brought out of the Purula and Kumara store for the purpose of being used in the ceremony. Each of them had a small hole bored at one end, and by means of a strand of human hair string passed through this it was attached to the pole from which, when erect, the six hung pendant. Of the Churinga the two

uppermost ones were supposed to have actually belonged to the two Hakea women who in the Alcheringa walked down to Ooraminna. Of the remaining four, two belonged to women and one to a man of the same totem, and the remaining one was that of a man of the Achilpa totem.

The decorated pole which is made in this way is called a *Nurtunja,* and in one form or another it figures largely in the sacred ceremonies, especially in the case of those which are associated with northern localities. Its significance will be referred to subsequently.

As soon as the *Nurtunja* was ready, the bodies of the performers were decorated with designs drawn in ochre and bird's down, and then, when all was ready, the *Nurtunja* was carried by the Purula man to the ceremonial ground, and there, by the side of the *Parra,* the two men knelt down, the hinder one of the two holding the *Nurtunja* upright with both hands behind his back. It is curious to watch the way in which every man who is engaged in performing one of these ceremonies walks; the moment he is painted up he adopts a kind of stage walk with a remarkable high knee action, the foot being always lifted at least twelve inches above the ground, and the knee bent so as to approach, and, indeed, often to touch the stomach, as the body is bent forward at each step.

The Purula man who had been assisting in the decoration now called out to the other men who had not been present to come up. This calling out always takes the form of shouting *"pau-au-au"* at the top of the voice, while the hand with the palm turned to the face, and the fingers loosely opened out is rapidly moved backwards and forwards on the wrist just in front of the mouth, giving a very peculiar vibratory effect to the voice. At this summons all the men on the ground came up at a run, shouting as they approached, *"wh'a! wha! wh'r-rr!"* After dancing in front of the two performers for perhaps half a minute, the latter got up and moved with very high knee action, the *Nurtunja* being slowly bent down over the heads of the men who were in front. Then the dancers circled round the performers, shouting loudly *"wha! wha!"* while the latter moved around with them. This running round the performers is called *Wahkutnima.*

Then once more the performers resumed their position in front of the other men, over whose heads the *Nurtunja* was again bent down, and then two or three of the men laid their hands on the shoulders of the performers, and the ceremony came to an end. The *Nurtunja* was laid on one side, and the performers, taking each a little bit of down from it, pressed this in turn against the stomach of each of the older men who were present. The idea of placing hands upon the performers is that thereby their movements are stopped, whilst the meaning of the down being pressed against the stomachs of the older men is that they became so agitated with emotion by witnessing the sacred ceremony that their inward parts, that is, their bowels, which are regarded the seat of the emotions, get tied up in knots, which are loosened by this application of a part of the sacred *Nurtunja*. In some ceremonies the *Nurtunja* itself is pressed against the stomachs of the older men, the process receiving the special name of *tunpulilima*.

The whole performance only lasted about five minutes, while the preparation for it had occupied more than three hours. . . . .

. . . . The fourth phase was a very well-marked one, as with it were ushered in the series of fire ordeals which are especially associated with the Engwura. The young men had already had by no means an easy time of it, but during the next fortnight they were supposed to be under still stricter discipline, and to have to submit themselves to considerable discomfort in order to prove themselves worthy of graduating as *Urliara*. . . . .

Avoiding on this, the first morning of the new departure in the ceremonies, the women's camp, which lay out of sight of the Engwura ground on the other side of the river, the *Illpongwurra* were taken out through a defile amongst the ranges on the west side of the camp. As the day wore on it became evident that there was unusual excitement and stir in the women's camp. One of the older ones had been informed that the *Illpongwurra* would return in the evening, and that they must be ready to receive them. She had been through this part of the ceremony before, and knew what had to be done, but the great majority of the women required instructing. About five o'clock in the evening all the women and children gathered together on the flat stretch of ground on the east side of the river. The Panunga

and Bulthara separated themselves from the Purula and Kumara. Each party collected grass and sticks with which to make a fire, the two being separated by a distance of about one hundred yards. A man was posted on the top of a hill overlooking the Engwura ground on the west, and just before sunset he gave the signal that the *Illpongwurra* were approaching. They stopped for a short time before coming into camp, at a spot at which they deposited the game secured, and where also they decorated themselves with fresh twigs and leaves of the Eremophila bush. These were placed under the head-bands, so that they drooped down over the forehead, under the arm-bands, and through the nasal septum. Then, forming a dense square, they came out from the defile amongst the ranges. Several of the *Urliara* who were carrying Churinga met them, some going to either side, and some going to the rear of the square. Then commenced the swinging of the bull-roarers. The women on the tip-toe of excitement lighted their fires, close to which were supplies of long grass stalks and dry boughs. The *Illpongwurra* were driven forwards into the bed of the river, pausing every now and then as if reluctant to come any further on. Climbing up the eastern bank, they halted about twenty yards from the first group of women, holding their shields and boughs of Eremophila over their heads, swaying to and fro and shouting loudly *"whrr! whrr!"* The Panunga and Bulthara women to whom they came first stood in a body behind their fire, each woman, with her arms bent at the elbow and the open hand with the palm uppermost, moved up and down on the wrist as if inviting the men to come on, while she called out *"kutta, kutta, kutta,"* keeping all the while one leg stiff, while she bent the other and gently swayed her body. This is a very characteristic attitude and movement of the women during the performance of certain ceremonies in which they take a part. After a final pause the *Illpongwurra* came close up to the women, the foremost amongst whom then seized the dry grass and boughs, and setting fire to them, threw them on to the heads of the men, who had to shield themselves, as best they could, with their boughs. The men with the bull-roarers were meanwhile running round the *Illpongwurra* and the women, whirling them as rapidly as pos-

sible; and after this had gone on for a short time, the *Illpongwurra* suddenly turned and went to the second group of women, followed, as they did so, by those of the first, and here the same performance was again gone through. Suddenly once more the men wheeled round and, followed by both parties of women who were now throwing fire more vigorously than ever, they ran in a body towards the river. On the edge of the bank the women stopped, turned round and ran back, shouting as they did so, to their camp. The *Illpongwurra* crossed the river bed and then ran on to the Engwura ground where, sitting beside the *Parra*, was a man decorated for the performance of an Unjiamba ceremony. Still holding their shields, boomerangs, and boughs of Eremophila, they ran round and round him shouting *"wha! wha!"* Then came a moment's pause, after which all the men commenced to run round the *Parra* itself, halting in a body, when they came to the north end to shout *"wha! wha! whrr!"* more loudly than before. When this had been done several times they stopped, and then each man laid down his shield and boomerangs and placed his boughs of Eremophila so that they all formed a line on the east side of and parallel to the *Parra*, at a distance of two yards from this. When this was done the *Illpongwurra* came and first of all sat down in a row, so that they just touched the opposite side of the *Parra* to that on which the boughs were placed. In less than a minute's time they all lay down, in perfect silence, upon their backs, quite close to one another, with each man's head resting on the *Parra*. All save one or two old men moved away, and these few stayed to watch the *Illpongwurra*. For some time not a sound was to be heard. None of them might speak or move without the consent of the old men in whose charge they were. By means of gesture language one or two of them asked for permission to go to the river and drink at a small soakage which had been made in the sand. In a short time they returned, and then it was after dark before they were allowed to rise. . . . .

. . . . In the early part of the afternoon of this day the *Illpongwurra* had to submit themselves for the second time to an ordeal by fire. A secluded spot amongst the ranges some two miles away from Alice Springs was selected, and here, while

the young men rested by the side of a water-hole in the bed of the Todd, the *Urliara,* who were in charge of them, went to the chosen spot and made a large fire of logs and branches about three yards in diameter. Then the young men, of whom forty were present, were called up, and putting green bushes on the fire they were made to lie down full length upon the smoking boughs, which prevented them from coming into contact with the red-hot embers beneath. The heat and smoke were stifling, but none of them were allowed to get up until they received the permission of the Urliara. After they had all been on once, each one remaining for about four or five minutes on the fire, the old men came to the conclusion that they must repeat the process, and so making up the fire again, they were once more put on in the midst of dense clouds of smoke, one of the older men lifting up the green boughs at one side with a long pole so as to allow of the access of air and ensure the smouldering of the leaves and green wood. There was no doubt as to the trying nature of the ordeal, as, apart from the smoke, the heat was so great that, after kneeling down on it to see what it was like, we got up as quickly as possible, and of course the natives had no protection in the way of clothes.

When this was over, the *Illpongwurra* rested for an hour by the side of the waterhole, for the day was a hot one, the thermometer registering 110.5° F. in the shade, and 156° F. in the sun, while the ceremony was in progress. . . . .—SPENCER AND GILLEN, *Native Tribes of Central Australia,* 212–30; 271–86; 347–51; 372–73 (Macmillan, 1901).

[EFFECT OF AUSTRALIAN EDUCATION AS SHOWN IN FOOD REGULATIONS]

. . . . When I first became acquainted with the Kurnai tribe, I observed that a man provided food for his wife's father. This custom is called *Neborak.* The food consists of a certain part of the daily catch of game procured by him. I found, for instance, that when he caught say five opossums, he gave two to his wife's father, and two to her brothers. On making inquiries and observing further, I found that food, including in that term all game caught by the men and all vegetable food obtained by

the women, was shared with others according to well-understood rules. Thus there was a certain community in food, and there was an acknowledged obligation to supply certain persons with it. The following particulars which I ascertained and noted will show how it worked among the Kurnai and other tribes.

It is assumed that a man kills a kangaroo at a distance from the camp. Two other men are with him, but are too late to assist in killing it. The distance from the camp being considerable, the kangaroo is cooked before being carried home. While the first man lights a fire, the others cut up the game. The three cook the entrails and eat them. The following distribution is made. Men 2 and 3 receive one leg and the tail, and one leg and part of the haunch, because they were present, and had helped to cut the game up. Man number 1 received the remainder, which he carried to the camp. The head and back are taken by his wife to her parents, and the remainder goes to his parents. If he is short of meat, he keeps a little, but if, for instance, he has an opossum, he gives it all away. His mother, if she has caught some fish, may give him some, or his wife's parents may give him some of their share, and they also would in such a case give her some next morning. The children are in all cases well cared for by their grandparents.

The giving of food by the wife's parents on the following morning is founded on the assumption that their son-in-law provided for his family on the preceding day, but may want some food before going out to hunt afresh. The food received by the wife's parents and by the husband's parents is shared by them with their family.

If a wombat were killed at a distance from the camp, its intestines would be taken out and the animal skewered up and carried home. If it was, however, close at hand, help might be obtained and the game carried whole. All the animal is sent to the wife's parents, this animal being considered as the best of food. The wife's father distributes it to the whole camp, but he does not give any to the hunter unless the animal has been carried in whole, for otherwise he is expected to have eaten of the entrails and therefore not to be hungry. On the following

morning, however, he sends some of it by his daughter to her husband.

A native sloth bear is either cooked where caught, or carried home raw, according to the distance. If one is killed, it is given to the wife's parents; if two, one to the wife's parents, and one to the man's parents; if three, then two to the wife's parents, and one to the man's parents, and so on. The hunter will probably keep the liver for himself and wife. On the following morning the wife's parents will give her some if she has no food.

An emu is cooked where killed unless it is near the camp. The intestines, liver, and gizzard are eaten by the hunter. The legs go to the wife's father as *Neborak,* and the body is the share of his parents.

A lace-lizard is shared with all in the camp.

If a man kills one opossum, he keeps it for himself and his wife. Any others go to the wife's father. I remember a case where a man caught ten, of which he kept one, and all the others became *Neborak.*

If several swans are killed by a hunter, he keeps one or more, according to the wants of his family. The remainder go to his wife's parents, or, if many have been procured, most of them, and the lesser number go to his parents.

A conger-eel should be sent to his wife's father, who will probably share it with his family.

In all cases the largest share and the best of the game is *Neborak.* The grandchildren are fed by their grandparents. The supply of vegetable food obtained by the woman is all devoted to her children and herself.

The following instances will show what would be the distribution when members of the group other than the wife's and the man's parents are in camp.

A kangaroo killed by a married man assisted by a *Brewit* (unmarried man) would all go to the wife's parents except the left leg to his brother, and the right leg to the *Brewit.*

If a catch of eels were made, the following might be the division of them, if the individuals were camped together. Man and wife, a large eel. Mother's brother and wife, a large eel.

Children of mother's brother, a small eel; and to married daughter, a small eel.

Similar rules obtained in the Ngarigo tribe, of which the following may be taken as an example:—

Of a kangaroo the hunter would take a piece along the backbone near the loin. The father would have the backbone, ribs, shoulders, and head. The mother the right leg, the younger brother the left foreleg. The elder sister would have a piece alongside the backbone, the younger sister the right foreleg. The father shares his portion thus: to his parents, tail and piece of backbone; and the mother shares her portions with her parents, giving them part of the thigh and the shin.

A wombat is cooked, then cut open and skinned. The skin is cut into strips and divided with parts of the animal thus:—The head to the person who killed the animal. His father the right ribs; mother the left ribs and the backbone, which, with some of the skin, she gives to her parents. Her husband's parents receive some of the skin. The elder brother gets the right shoulder, the younger the left. The elder sister the right hind leg, the younger the left hind leg, and the rump and liver are sent to the young men's camp.

A native bear is divided in the following manner:—Self, left ribs; father, right hind leg; mother, left hind leg; elder brother, right forearm; younger brother, left forearm. The elder sister gets the backbone; and the younger the liver. The right ribs are given to the father's brother, a piece of the flank to the hunter's mother's brother, and the head goes to the young men's camp.

An emu was divided as follows:—The backbone to the hunter; left leg, left shoulder, and left flank to his father. The neck and head, right flank and right ribs to his mother. To his elder brother, the left rib; younger brother, part of the backbone; elder sister, part of the right thigh; younger sister, the right shin. The left thigh and left shin went to the young men's camp. The father and mother shared their part with their parents.

A lace-lizard is divided thus:—The left leg to the hunter; the father and mother, the upper part of the body; the elder and younger brothers, the right hind leg; the elder sister, part of the

lower half of the backbone. The tail goes to the younger sister. The father and mother share their portion, by giving to the hunter's father the foreleg, and to her father the backbone. The remainder goes to the young men's camp.

In this last the brothers and sisters are supposed to be grown up, and to be married. If these people were not all in the camp at the same time, the division would be made on the same lines.

As I had not an opportunity of checking this list, by further personal inquiries, and as the Rev. John Bulmer had Manero blacks at the Aboriginal Station under his control, I requested him to do so for me. This he very kindly did, and his reply was that he found the food to be divided as I have described. He found that when a kangaroo was killed, the whole was sent to the hunter's father, if he was at the camp, the former only eating a small piece himself. But, if he had no meat, his father would send him the head and part of the backbone. His wife would have to rely for a share of meat on her relations, or on that part to which she was entitled by custom.

Speaking of the custom of *Neborak,* Mr. Bulmer said he had observed that it was strictly kept, and that a man had to keep the parents of his wife supplied with the best parts of the game, and if possible with wombat flesh, that being considered the best of all. He had seen the whole of the right side of a wombat sent by one of the men as *Neborak*. This was always carried by the wife to her parents, as well as to the other camps for her husband, where it was mostly thrown down near the fire, and not given by hand, as they object to take it direct from any one's hand, lest some harm should come to them thereby. . . . .

There is a passage in Protector Thomas's report to Governor La Trobe which is worth quoting as giving the customs of the Wurunjerri and other neighbouring tribes when the State of Victoria was first settled. He says:—

"In the Kulin tribes, they seldom travel more than six miles a day. In their migratory movements all are employed. Children are getting gum, knocking down birds; women are digging up roots, killing bandicoots, getting grubs; the men hunting and scaling trees for opossums. They are mostly at the encampment an hour before sundown; the women first, who get the fire and

water; by this time their spouses arrive. They hold that the bush and all it contains are men's general property; that private property is only what utensils are carried in the bag; and this general claim to nature's bounty extends even to the success of the day; hence at the close, those who have been successful divide with those who have not been, so 'that none lacketh while others have it,' nor is the gift considered as a favour, but as a right, brought to the needy and thrown down at his feet."

So far as I know, the throwing down of food on the ground arises out of the fear of receiving anything from the hand of another person and thus being infected by evil magic.

In the Gringai tribe game taken in hunting is usually divided equally.

All the males of the Chepara tribe are expected to provide food, if not sick. If a man is lazy and stays in camp, he is jeered at and insulted by the others. Men, women, and children leave the camp in the early morning for the purpose of hunting for food where they think that game will be plentiful. After hunting sufficiently, the men and women carry the various catches of game to the nearest water-hole, where fires are made and the game cooked. The men, women, and children all eat together amicably, the food being distributed among them by the old men equally to all the men, women, and children. After the meal, the women carry what is left of the cooked food to the camp, the men hunting by the way. In this tribe a man is not bound to provide his wife's parents with food, unless the old man is sick, or too feeble to hunt, or unless the wife's mother is a widow. . . . .

Mr. Christison tells me that when he has been out on expeditions, accompanied by his blackboys only, and the food ran short, and the division of rations was very scanty, they have refused to take their share, intimating that he stood more in need of it. On previous occasions, when he had his own countrymen with him, the contrary was the case, for the ration-bags were broached, and when in any difficulties, grumbling was the rule. In their wild state the Dalebura seemed to live peaceably enough. He had seen a camp of three hundred live for three months without a quarrel.

Mr. M'Alpine, whom I have already mentioned, said that he had a Kurnai blackboy in his employ about 1856–57. The lad was strong and healthy, until one day Mr. M'Alpine found him ill. He explained that he had been doing what he ought not to have done, that he had "stolen some female 'possum," before he was permitted to eat it; that the old men had found him out, and that he would never grow up to be a man. He lay down under that belief, so to say, and never got up again, dying within three weeks. . . . .—A. W. Howitt, *Native Tribes of South-East Australia*, 756–70.

AUSTRALIAN MESSENGERS AND MESSAGE-STICKS

In all tribes there are certain men who are, so to say, free of one or more of the adjacent tribes. This arises out of tribal intermarriage; and, indeed, marriages are sometimes arranged for what may be termed "state reasons," that is, in order that there may be means of sending ceremonial communications by some one who can enter and traverse a perhaps unfriendly country, with safety to himself and with security for the delivery of his message. In some cases these ceremonial messengers, as will be seen later on, are women. But the bearing of merely friendly messages within the tribe is usually by a relative of the sender. The message itself is, in other tribes, conveyed by what the whites in certain districts call a "blackfellow's letter"—a message-stick. There has been much misunderstanding, not to say misstatement, as to the real character of these message-sticks, and the conventional value of the markings on them. It has been said that they can be read and understood by the person to whom they are sent without the marks on them being explained by the bearer. I have even heard it said that persons, other than the one to whom a stick is sent, can read the marks with as much ease as educated people can read the words inscribed on one of our letters.

The subject is important in so far that a right understanding of the method by, and the manner in, which the markings on the sticks are made to convey information, is well calculated to afford some measure of the mental status of the persons using them. . . . .

If the message is to call together a meeting of the elder men of the tribe, the messenger is some noted old man, nominated by the *Pinnaru* (Headman) who sent the message. The same would be the case when neighbouring tribes are invited to attend the ceremonies of initiation. But in any other matter which might be attended by danger, or where treachery is feared, it is not men but women who are sent.

The most important messages sent by the Dieri to neighbouring tribes are those relating to disputes between them. For such purposes women are chosen, and if possible such women as belong to the tribe to which the embassy, if it may be so called, is sent. Women are chosen in such a case for two reasons: first, because they are going to a tribe in which they have near relations; and second, because it would be less likely that they would be treacherously made away with than men.

Forty years ago these women were usually the wives of Headmen of the *Murdus* (totems), and occasionally one of the wives of the principal Headman, *Jalina-piramurana,* was among them.

The women are accompanied by their *Pirraurus,* for the Dieri consider that on such a mission a man would be more complaisant as regards the acts of his *Pirrauru* wife than as regards those of his *Tippa-malku* wife. For on such occasions it is thoroughly understood that the women are to use every influence in their power to obtain a successful issue for their mission, and are therefore free of their favours. After what I have said in the earlier part of this work as to the class rules, it is perhaps hardly necessary to say here that in these cases the class rules are obeyed.

If the mission is successful, there is a time of licence between its members and the tribe, or part of a tribe, to which it has been sent. This is always the case, and if the Dieri women failed in it, it would be at peril of death on their return. This licence is not regarded with any jealousy by the women of the tribe to which the mission is sent. It is taken as a matter of course. They know of it, but do not see it, as it occurs at a place apart from the camp.

The members of such a mission are treated as distinguished guests. Food is provided for them, and on their return home,

after about a week's stay, they are loaded with presents. If the mission is unsuccessful, messages of dreadful threatening are sent back by them.

The mode of announcing a mission, whether by male or female messengers, is by telling it to the *Pinnaru* of the camp, when alone, as soon as the former arrive. Nothing is then said to any one, but when all the people are in the camp about the time of going to rest, the *Pinnaru* announces the visit. There is then an excited discussion on it, if it be a matter of moment or general interest, for an hour or two; to be again resumed at daybreak, and so on, night and morning, for a day or two, until some definite determination is arrived at.

The arguments of the old men who speak are noted by the messengers, and on their return they repeat as nearly as they are able the popular sentiments of the tribe.

Mr. Gason has described to me how he was present on several occasions on the return of a mission which had been entrusted to women. The Headman and the principal old men received them kindly, and congratulated them on their safe return, but appeared anxious, and clutched their spears in an excited manner. No one but the Headman spoke to the women immediately on their return; but when all the men were seated, they were questioned as to the result of their mission. The result was at once told to all the people in the camp, who rejoiced if it were favourable, but who became fearfully excited and seemed to lose all control over themselves if it had failed, rushing to and fro, yelling, throwing sand into the air, biting themselves, and brandishing their weapons in the wildest manner imaginable.

In cases where such a mission had been successful, women of the other tribe usually accompanied it back, to testify its approval by their tribe. Agreements so made are probably observed as faithfully as are many treaties more formally made by civilised people.

During my expedition to the north of Cooper's Creek an attempt was made by some of the Yaurorka tribe to surprise my camp by night. As it was most important for the success of my expedition that I should be on friendly terms with the people of the Barcoo delta, I went on the following morning to their

camp, which was near at hand on the same water, taking with me my black boy, who spoke their language, and at an interview with the old men, apart from the others, I cautioned them against in any way molesting us, who were travelling peaceably in their country. I told them that if I found blackfellows prowling about my camp at night, I should certainly shoot them after this notice.

After some discussion the old men promised that none of their people should go near our camp at night, and that when doing so in the daytime they would lay down their arms at a little distance, and on my part I promised not to do them any hurt. I must say that this agreement was kept by them; and I observed that not only they but their fellow-tribesmen also in future laid down their weapons when visiting us. This corroborates Mr. Gason's statement that the Dieri keep to the agreements which they make.

As the Dieri send missions to the surrounding tribes, so do these also send them to the Dieri when occasion requires, and the proceedings are such as I have described.

It may be noted here that a Dieri man of no note or influence, arriving at a camp as a messenger, sits down near to it without saying anything. After remaining a few minutes in silence, the old men gather round him, and ask whence he comes and what has befallen him. He then delivers his message and details his news. Two of the old men then stand up, one retailing the message and the other repeating it in an excited manner. The newcomer, if he is a friendly stranger, is hospitably entertained, living in the hut of some man of the same totem as himself.

I remember an instance of such a visit when I was camped close to a small number of Yaurorka, some distance to the north of Cooper's Creek, with whom I was on friendly terms under the agreement spoken of. A stranger had arrived from the south, and so far as I remember, was a Dieri. I could watch all their movements by the light of their fire, and hear what was spoken in a loud tone, for we were separated only by a deep though narrow water channel. They spent the evening in great feasting, and the women were busy till late at night in pounding and grinding seeds for food. The stranger related his news, and it was

repeated in a loud tone to the listening tribesmen sitting or standing at their fires. I was unable to understand more than the general meaning of the announcements, but my black boy, who was acquainted with the Dieri speech, explained that this man was a "walkabout blackfellow," in other words, a messenger who was telling them his news.

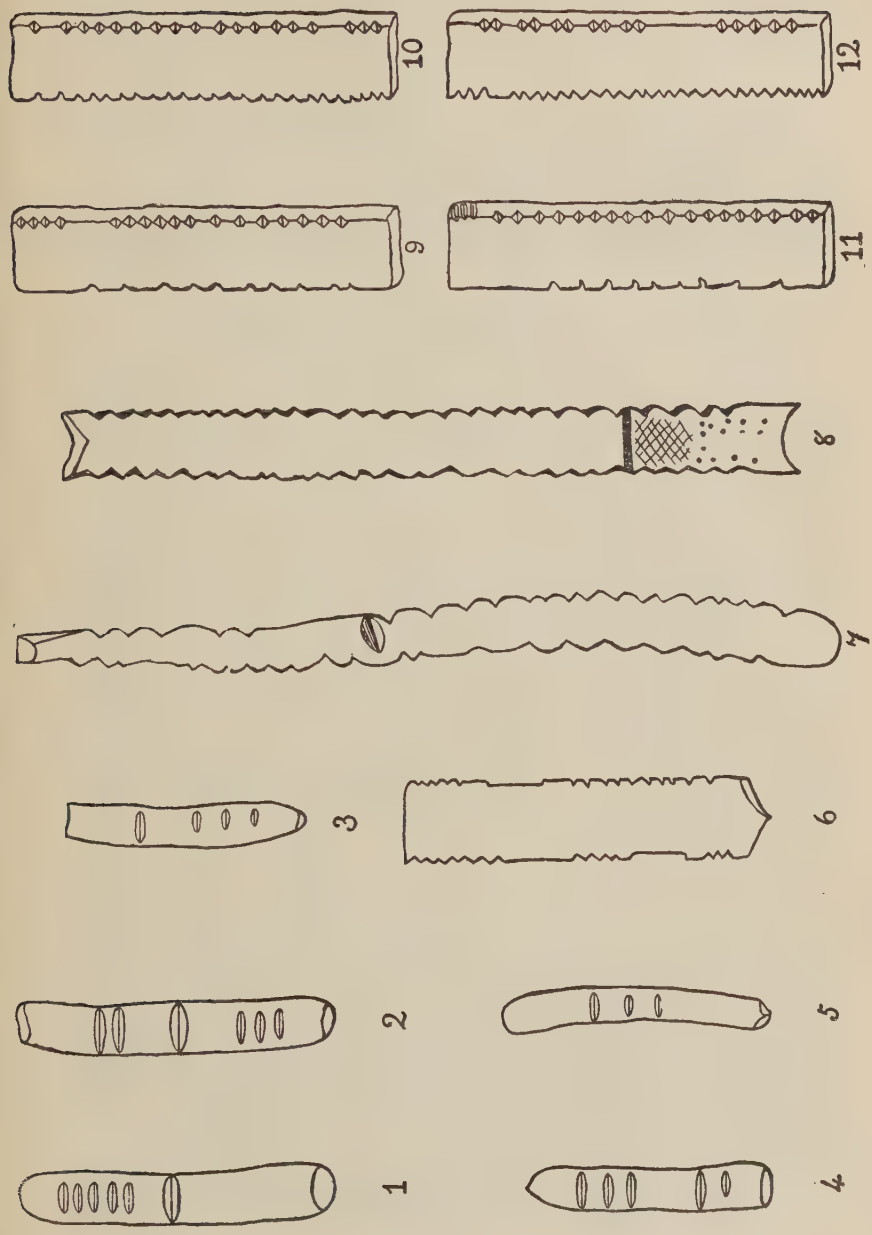
Messengers from time to time arrived at that branch of the Yantruwunta tribe which lived where I had established my depot, and with whom I was on the best of terms. The old men, the *Pinnarus*, told me on several occasions that a messenger had arrived from beyond the "great stones," or stony country, that is Sturt's Stony Desert, bringing news of the *Whil-pra-pinnaru*, meaning the explorer M'Kinlay. They first reported that he was surrounded by flood waters, and, after some time, that the waters had fallen and that he had "thrown away" his cart, and was gone northwards they knew not where. These messengers came from the tribe living about where Birdsville is situated. The account given of M'Kinlay's movements was correct, and I afterwards saw the country which had been flooded. This shows how news is carried from one tribe to another, in this case for a distance of about a hundred and fifty miles at least. . . . .

The use of message-sticks appears to have been common in the tribes inhabiting the country through which the Darling River flows. The following particulars relate to the tribes of the Itchumundi nation.

Message-sticks can be sent by any one. The marks placed on the sticks are an aid to memory. [Figs. 1 and 2] represent a message-stick sent to inform the Kongait tribe that the Tongaranka intended holding an initiation ceremony, and inviting their attendance. The notches on [Fig. 1] have the following explanation, counting from the top:—

1. Jumba=make young men.
2. Yantoru=sticks for knocking out teeth.
3. Purtali=small bull-roarer.
4. Bungumbelli=large bull-roarer.
5. Not explained.
6. (Large notch) Tallyera=marking with red ochre.

On [Fig. 2] the notches refer to different localities from


10
12
9
11
8
7
3
6
2
5
1
4

which the blacks are to come to Yancannia, which is the larger notch.

[Figs. 3 and 4] represent another Tongaranka stick, from the son of the Headman to a man at Tarella. The message was to tell him that the sender, his brothers, and two old men were at a certain water-hole, and wished him to bring his son to be initiated, as there were two other boys ready for the ceremony. In 3 the large notch is the recipient of the message, and the three smaller ones his son and the other boys. The group of three notches in No. 4 represent the sender of the stick and his two brothers, while the two small cuts are the old men.

[Fig. 5] represents a message-stick sent by a man of the Tongaranka tribe, inviting two of his friends at a distance to come and see him, as his wife was ill and could not travel. The lower notch represents the sender, and the two others the men invited.

This message-stick is made of part of a small branch of a tree, and is wrapped round with a few strands of a man's kilt, with which article of man's attire the boy is invested after initiation. The whole is tied up in about two feet of the cord made of twisted opossum fur, which the novice wears for a time, after his initiation, as evidence of his having been made a "young man."

The message-stick was known and made use of by the Ngarigo, but not to such an extent as by other tribes. It was a piece of wood a few inches long, with notches at the edges which referred to the message with which the bearer was entrusted.

About the year 1840 my friend, the late Mr. A. M. M'Keachie, met two young men of the Ngarigo tribe at the Snowy River, near to Barnes's Crossing; one of them carried two peeled sticks each about two feet long, and with notches cut in them, which they told him reminded them of their message. The sticks were about one half-inch in diameter. Their message was that they were to collect their tribe to meet those of the Tumut River and Queanbeyan, at a place in the Bogong Mountains, to eat the Bogong moths.

A messenger in the Wiradjuri tribe is provided with a message-stick, the notches of which remind him of his message, and

if it is to call the people together for initiation ceremonies, he carries a bull-roarer (*Bobu* or *Mudjigang*), a belt (*Gulir*), a man's kilt (*Buran* or *Tala-bulg*) made of kangaroo-rat skin, a head-string (*Ulungau-ir*), and a white head-band (*Kambrun*). The messenger having made known his message to the man to whom he is sent, and delivered his message with the other emblems above mentioned, the recipient assembles the men at the council-place (*Ngulubul*). He then shows them the message-stick and other articles, and delivers to them the message which he has received. Sometimes, when the kilt is sent, the strands of skin forming it are used instead of a notched stick, to remind the bearer of his message.

The recipient of the message-stick sends it on, with all the articles which he has received, by one of his own people, and it thus travels until the farthest point is reached. . . . .

In the case of a message sent by the Turrbal tribe to call another tribe to come to an expiatory combat, a message-stick sent would be marked with certain notches, which the messenger in delivering it would explain in the following manner. Pointing to a certain set of notches, he would say, for instance, "There are the men of a big division of the Wide Bay Tribe, who are coming to see us, to have this fight about one of their people whose death they blame you for." Pointing to another set of notches, he would say, "These other people are coming to help them. This stick is sent you by the great man who sent me, and who says that you are to meet him, at such and such a place. You are to send word on, and tell your friends or the other tribes to come and help you."

The messenger who is sent to call people for a *Dora* ceremony not only carries a message-stick, but also a bull-roarer, to show to the old men.

In the tribes within fifty miles of Maryborough (Queensland), the sender of a message-stick makes it in the presence of his messenger and explains it to him. If the messenger cannot deliver it, he in his turn explains it to some other man who undertakes to deliver it. If shown to a man to whom it has not been explained, he may say, "I know this means something, but I do not know what it means."

The following will give an idea of the manner in which a message-stick is prepared and used in these tribes. [See Fig. 6.]

It is assumed to be from a blackfellow living at some place distant twenty to thirty miles from where some friend is camped, whom the sender desires to inform of the following message: "I am here, five camps distant from you. In such and such a time I will go and see you. There are so and so with me here. Send me some flour, tea, sugar, and tobacco. How are Bulkoin and his wife and Bunda?"

Having his messenger beside him he would make the marks shown.

Five notches represent the five camps (stages), distance to the recipient; a flat place cut on the stick shows a break in the message; ten notches the time after which the sender will visit his friend; eight notches the eight people camped with the sender; four notches the articles asked for; another flat piece on the stick shows another break in the message; and three notches the three persons asked after. Having made these marks, and having explained them to the messenger, he carves the ends of the stick to make it look ornamental, and gives it to him for delivery.

The Headmen of a branch of the Wotjobaluk tribe having consulted and decided that, for instance, some other part of the tribe should be summoned to meet them on some special occasion, the principal man among them prepares a message-stick by making notches on it with a knife. In the old times this was done with a sharp flint or a mussel shell. The man who is to be charged with the message looks on while this is being done, and he thus receives his message, and learns the reference which the marks on the stick have to it. A notch is made at one end to indicate the sender, and probably also notches for those who join him in sending the message. A large notch is made on one side for each tribal group which is invited to attend. If all the people are invited to attend, then the stick is notched from end to end. If very few are invited, a notch is made for each individual, as he is named to the messenger. [Fig. 7] represents one of these sticks, which was made to convey an invitation from the Headman of the Gromilluk horde to the Yarik-kulluk horde at Lake Coorong, both being local divisions of the Wotjobaluk

tribe. All the people were invited to attend. The three notches at the upper end on the right-hand side show the sender and his friends, who were the principal Gromilluk men. The large notch represents the Yarik-kulluk horde and its Headman, to whom the message was sent. The notches continuing along the edge to the end and along the other edge indicate all the people of the horde being invited.

The oldest man having made such a message-stick, hands it to the next oldest man, who inspects it, and, if necessary, adds some further marks and gives corresponding instructions. Finally the stick, having passed from one to the other of the old men, is handed to the messenger, who has been duly told off for this duty, and he is informed at the same time when the visitors will be expected to arrive. The enumeration of the days, or the stages of the journey of the visitors, is made in the following manner. Commencing at one little finger, the enumeration is as follows:—

1. *Giti-munya,* or little hand, that is, little finger.

2. *Gaiup-munya,* from *gaiup,* one, and *munya,* a hand; the third finger.

3. *Marung-munya,* from *Marung,* the desert pine (*Callitris verrucosa*). The middle finger, being longer than the others, is like that tree, which is taller than the other trees growing in the Wotjo country.

4. *Yollop-yollop-munya,* from *yollop,* to point or aim at; thus *yollop-bit,* the act of aiming a spear, as by the fore-finger being used as a throwing-stick; the fore-finger.

5. *Bap-munya,* from *bap,* mother, therefore mother of the hand; the thumb.

6. *Dart-gur,* from *dart,* a hollow, and *gur,* the fore-arm; the hollow formed by the end of the radius and the wrist.

7. *Boi-bun,* a small swelling, *i. e.* the swelling of the flexor muscle of the fore-arm.

8. *Bun-dari,* a hollow, *i. e.* the inside of the elbow-joint.

9. *Gengen-dartchuk,* from *gengen,* to tie, and *dartchuk,* the upper arm. This is the name of the place where the armlet of opossum pelt is tied round the biceps for ornament.

10. *Borporung,* the point of the shoulder.

11. *Jarak-gourn,* from *jarak,* a reed, and *gourn,* the neck. This refers to the place where the reed necklace is worn.

12. *Nerup-wrembul,* from *nerup,* the butt, as *nerup-galk,* the butt or base of a tree, and *wrembul,* the ear.

13. *Wurt-wrembul,* from *wurt,* above, and also behind, and *wrembul,* the ear; that is, the head above and just behind the ear.

14. *Doke-doke,* from *doka,* to move, *i. e.* "that which moves," being the muscle which can be seen when in the act of eating.

15. *Det-det,* hard. This is the crown of the head. From this place the count goes down the other side by corresponding places.

This method of counting seems to do away with the often-repeated statement that the Australian aborignes are unable to count beyond four or at the most five. By the above manner of counting they are able to reckon up to thirty, with names for each place.

The messenger carries the message-stick in a net bag, and on arriving at the camp to which he is sent, he hands it to the Headman, at some place apart from the others, saying, "So and so sends you this," and he then gives his message, referring as he does so to the marks on the stick; and, if his message requires it, also to the time in days, or the stages to be made, in the manner already pointed out.

The Headman, having examined the message-stick, hands it to the other old men, and having satisfied himself how many people are wanted, and how many hordes are to be present, and having made such further inquiries as seem necessary, calls all the people together and announces the message to them.

This kind of message-stick, called *galk,* that is, wood or stick, may be seen by any one. It is retained by the recipient, who carries it back to the meeting to which he has been called. The messenger lives in the camp with some of his friends, until they all depart to the meeting, when he accompanies them.

Such a messenger would never be interfered with. No one would think of injuring a man who brings news of important matters. But if any one were to molest him, the whole of the people would take the matter up, and especially his own friends. The messenger does not carry anything emblematical of his

mission beyond the stick, even when carrying a message calling a meeting for an expiatory combat, or for a *Ganitch*, the initiation ceremony. But when conveying news of death, he smears his face with pipe-clay in token of his message. . . . .

As an instance of the procedure of the tribes of the Kulin nation, I take that of the Wurunjerri.

It was the Headman who sent out messengers (*Wirrigiri*) to collect people for festive occasions, for ceremonial or expiatory fights, or for other matters concerning the tribe, and he did this after consulting with the other old men. The messenger was usually one of the younger men, and if possible one whose sister was married to some one in that place to which he was to go, for under such circumstances a man could go and return in safety, being protected by his friends and connections. Messengers were chosen who were not implicated in any blood-feud. People were always pleased to receive news, and no messenger known as such was ever injured.

The message-stick, called *Mungu* or *Kalk* (wood) or *Barndana* (that is, "mark it"), was made by the sender, and was retained by the recipient of the message as a reminder of what he had to do, perhaps to meet the sender at a certain time and place, or to meet and feast on fish or game. For friendly meetings, when there was no quarrel or danger, the messenger carried a man's belt (*Branjep*), and a woman's apron (*Kaiung*) hung upon a reed. For meetings to settle quarrels or grievances, such as a bodily injury inflicted, or the death of some one by evil magic, by a set combat, or to concert an attack on another tribe, the *Branjep* was hung upon a jag-spear made of ironbark wood, and when calling a meeting for the initiation of boys (*Talangun*), the messenger carried also a bull-roarer and a man's kilt hung upon a reed. The bull-roarer was kept secret from the sight of women and children.

If a message was to call the people together for a corrobboree or for ball-playing, a ball made of opossum pelt, cut in strips and rolled up tightly, was sent. This was called *Mangurt*, and was sent also from one person to another as a friendly mark of regard. For ball-playing, the ball, made from the scrotum of an old-man kangaroo, stuffed with dry grass was also sent.

The place of meeting being named in the message, which the messenger "carried in his mouth," it might be further necessary to indicate the day on which the people should assemble, and this was done, as with the Wotjobaluk, by enumerating parts of the human body, commencing with the little finger of one hand. The names of these enumerations are as follows:—

1. *Bubupi-muningya,* the child of the hand, the little finger.
2. *Bulato-ravel,* a little larger, the third finger.
3. *Bulato,* larger, the middle finger.
4. *Urnung-meluk,* from *Urnung,* a direction, and *Meluk,* a large grub found in some eucalypti; the forefinger.
5. *Babungyi-muningya,* the mother of the hand, the thumb.
6. *Krauel,* the wrist-joint.
7. *Ngurumbul,* a fork, the divergence of the radial tendons.
8. *Jeraubil,* the swelling of the radial muscles.
9. *Thambur,* a round place, the inside of the elbow-joint.
10. *Berbert,* the ringtail opossum. Also the name of the armlet made from the pelt of that animal, hence the name of the biceps round which the armlet is worn on festive occasions.
11. *Wulung,* the shoulder-joint.
12. *Krakerap,* the bag place, the place where the bag hangs by its band, *i. e.* the collar-bone.
13. *Gurnbert,* the reed necklace, the neck, or place where the reed necklace is worn.
14. *Kurnagor,* the point or end of a hill, or of a spur or ridge, hence the lobe of the ear.
15. *Ngarabul,* a range or the ridge of a hill, hence the side suture of the skull.
16. *Bundial,* the cutting-place, *i. e.* the place where the mourner cuts himself with some sharp instrument, from *Budagra,* "to cut," *e. g. Budagit-kalk,* "cut the log." This is the top of the head. From this place the count follows the equivalents on the other side.

The message-stick, [Fig. 8] is one which Berak made to show what they were like as used by his tribe formerly. The explanation is as follows. The notches on the upper end at the left hand of the stick represent the sender and other old men with him. The remainder of the stick being notched along the

whole of the two sides, means that all the men of both localities are to be present. The markings on the flat side, at the lower end, are only for ornament, as are also the crescent-shaped ends of the stick. This message is an invitation to some people at a distance to come to a corrobboree.

The Jajaurung counted the number of days or camps in the same manner as the Wotjobaluk and Wurunjerri, thus showing that this system was probably universal among the tribes of, at any rate, the Wotjo and Kulin nations. But the Wudthaurung tribe, about Geelong, with which Buckley lived for over thirty years, had, according to him, a different method. He says that a messenger came from another tribe saying they were to meet them some miles off. Their method of describing time is by signs on the fingers, one man of each party marking his days by chalking on the arm and then rubbing one off as each day passes. Elsewhere he says that before he left a certain place, a *Bihar* or messenger came to them. He had his arms striped with red clay to denote the number of days it would take them to reach the tribe he came from. On another occasion, when a large party left on a distant hunting excursion, they marked their arms in the usual manner with stripes to denote how many days they would be absent; and one of the men who remained did the same, rubbing off one mark each day, to denote the lapse of time.

I have seen counting done by the Kulin by the hand combined with the other method. The little finger being *Kanbo* or one, the third finger *Benjero* or two, the middle finger *Kanbo-ba-benjero*, three, the forefinger *Benjero-ba-benjero,* four, and the thumb *Benjero-ba-benjero-ba-kanbo,* five. The enumeration was then carried on in the manner described, commencing with *Krauel,* the wrist-joint.

In the Narrang-ga tribe meetings of the elders are called together by messengers who carry message-sticks. The messengers are chosen by the principal Headman, or in matters of local importance by the Headman of the locality, or the Headman who had initiated the proceedings in question. If a reply is required, the same or some other messenger will carry it back; sometimes with a message-stick, but very often by word of mouth only. There is apparently no rule as to the return message.

When a part of the tribe is at a distance, and the Headman wishes some of them to return to him, he sends a message-stick, on which he cuts a notch representing himself and others for the old men next to him in authority. These are cut on the upper edge of the stick, while the notches cut on the other edge represent the number of people he wants to come to him.

The message-stick is called *Mank,* and is rolled up in the skin of any kind of animal. At the present time a handkerchief is commonly used. If the message is a challenge to fight, the messenger in handing the message-stick says, *"Dudla,"* which means fight. If the message is one calling people together for a dancing corrobboree, a piece of wood is used, marked in a special manner, which is understood without further explanation. [Figs. 9 and 10] represent the two sides of such a stick. In [9] which is a message about a dancing corrobboree, the four notches on the upper part of the right-hand edge represent four old men who are invited to attend, those lower down are the women, and those on the left-hand edge represent the men who accompany the old men. In [10] the notch at the upper part of the right-hand edge is the sender of the message, the three at the bottom are singers, and the intermediate notches represent the women. The notches along the edge at the opposite side are the men of the tribe. [Figs. 11 and 12] are the two sides of a stick sent to summon to an initiation ceremony. The longer notches at the top of the right-hand edge of [11] represent the old men to whom the stick is sent, those lower down are the women, and the edge on the other side being notched indicates that the men are to come. On [12] the three upper notches represent the sender of the message and two other old men. The notches all down the edge represent all the men of that moiety of the tribe. The five notches at the bottom of the right-hand edge are the boys to be initiated, and the five pairs of notches above represent couples of men to look after the boys during the ceremony.

It is not lawful for women to see this stick, which would be sent rolled up with a corrobboree stick in some covering.

Two of the three old men referred to on [12] are two principal men who have already been instructed by the sender of the message, and whose duty it is to see that everything in their

department is done correctly. These two old men are next in authority to the Headman and sit with him in consultation. It seems from my information that these two old men are analogous to the man in the Wurunjerri tribe who stood by *Billi-billeri* and "gave his words to other people," as before mentioned.

The five boys may be of any division of the tribe. One of the men in each couple is the father's brother of the boy, and the other man's duty is to hold his hands over the boy's eyes during a certain part of the initiation ceremonies.

The plan on which these sticks are marked seems to be this. Assuming that the Headman of one part of the tribe wishes to send a message to the Headman of the other part, he cuts a notch on one end of the upper side for himself, with one or more notches close to it, according to the number of old men with him. At the other end he cuts a notch for the recipient of the message, and a number of notches for the people he wishes to be sent to him. If there is not enough room he cuts their notches on the under side. It seems from this that the marks themselves, for instance, on the corrobboree and initiation sticks, might from constant use by the same person, or a succession of persons using the same method, and for substantially the same objects, come to have a certain meaning. This might then become a first step to a rude style of communicating thought by marks, unaccompanied by verbal explanation. I was told of a case in which a message-stick was carried by my correspondent, Mr. Sutton, for one of the Narrang-ga, which was merely a flat piece of wood with one notch at one end and two notches close together at the other. He delivered it without saying more than, "This is from so-and-so," not having received any message with it. The recipient, however, knew that the sender had been separated from his wife, and he understood the stick to mean that the two had been reconciled, and were together again, and this was the correct reading of the marks on the stick. This supports the view which I have suggested.

In the Narrinyeri tribe a messenger is called *Brigge*. When on a mission, he carries some part of his totem as an emblem. For instance, a messenger of the Tanganarin carried a pelican's feather, one of the Rangulinyeri a dingo's tail, one of the

Karowalli a snake's skin. The messenger was safe from harm by reason of his office, and he was chosen to carry the message by the council of old men. The messenger delivered his message to the Headman of the clan to which he was sent, who sometimes escorted him part of the way back.

The message-stick was in the most rudimentary state in the Kurnai tribe. If, for instance, a man desired to send a message to men of another division of his clan, or of another clan, asking them to meet him at a certain time and place, he would probably do so in the following manner. I assume, as an illustration, that the meeting is to be at a locality indicated by name, that it will take place after "two moons," and that such and such persons are to be there. The sender in giving his message to his *Baiara*, or messenger, would, if he used anything to aid his memory, break off a number of short pieces of stick, equal in number to the people he asks to meet him, one for each person, or the people of a certain place. By delivering them one by one, his messenger checks the accuracy of his memory as to the verbal message given him. The number of stages to be travelled are fixed by telling them off on the fingers of one or of both hands. If they were insufficient, the count would be again over the same fingers, or recourse would be had to the toes.

If the message was sent by the Headman of the locality, or of the clan, relating, for instance, to the *Jeraeil* ceremonies, the messenger would also carry with him as his credentials a bull-roarer, which he would deliver with his message in secret.

It was not infrequently the case that a Headman, to authenticate his messenger, gave him some weapon, for instance a club, known to the recipient of the message. . . . .

The evidence shows that the message-sticks are merely a kind of tally, to keep record of the various heads of the message, and that the markings have no special meaning as conventional signs conveying some meaning. The instances which I have noted in the Narrang-ga and Mundainbura tribes merely show how such markings might, under favourable conditions, become the first steps to a system of conveying a message otherwise than verbally. What we find here may perhaps be considered as early stages, the ultimate result of which might be a system of writing, in

which symbols would bear some resemblance to the original notches on these message-sticks. . . . .—A. W. Howitt, *Native Tribes of South-East Australia*, 678–710.

THE RELATION OF THE MEDICINE-MAN TO THE ORIGIN OF THE PROFESSIONAL OCCUPATIONS

In the last volume of his *Synthetic Philosophy* (*Principles of Sociology*, Vol. III, pp. 179–324, "Professional Institutions") Mr. Herbert Spencer has made an attempt to work out a special application of his ghost theory of the origin of worship, in the thesis that the medicine-man is the source and origin of the learned and artistic occupations. This is a very fascinating theory and has in it elements of truth and of verisimilitude, but it is very far from affording a true view either of the place of the medicine-man in the development of society or of the origins of the occupations. It does not, indeed, seem probable that Spencer would have made this elaborate and somewhat strained effort to give the medicine-man a pre-eminent place in the development of the occupations if he had not been in a way committed to this course by his defective theory of the origin of worship in attention to dead ancestors. But having settled upon this theory, Spencer in these chapters pushes to the limit his habit of selecting the evidence favorable to his theory and omitting or brushing away the unfavorable evidence. Moreover, he has here resorted to a device which I believe he has not before used to any extent, that of giving evidence of an indeterminate character and claiming that "by implication" it is favorable to his argument. But after these detractions we must, as usual, admit that Spencer has opened up a new field of investigation and has treated it in a most suggestive manner. With a view to determining the amount of truth in the conclusions of Spencer, I will examine his statements in approximately the order they are made; and I will at the same time present some evidence, both from the sources used by Spencer and from other sources, tending to establish a different view of the relation of the medicine-man to the occupations.

The following preliminary statement of Spencer's general standpoint should be given first of all, in order that the bearing

of his particular claims may be well understood: "Recognizing the general truth, variously illustrated in the preceding parts of this work, that all social structures result from specializations of a relatively homogeneous mass, our first inquiry must be—in which part of such mass do professional institutions originate? Stated in a definite form, the reply is that traces of the professional agencies, or some of them, arise in the primitive politico-ecclesiastical agency; and that as fast as this becomes divided into the political and ecclesiastical the ecclesiastical more especially carries with it the germs of the professional, and eventually develops them. Remembering that in the earliest social groups there is temporary chieftainship in time of war, and that where war is frequent the chieftainship becomes permanent; remembering that efficient co-operation in war requires subordination to him, and that when his chieftainship becomes established such subordination, though mainly limited to war-times, shows itself at other times and favors social co-operation; remembering that when under his leadership his tribe subjugates other tribes he begins to be propitiated by them, while he is more and more admired and obeyed by his own tribe; remembering that in virtue of the universal ghost theory the power he is supposed to exercise after death is even greater than the power he displayed during life—we understand how it happens that ministrations to him after death, like in kind to those received by him during life, are maintained and often increased. . . . . Laudations are uttered before him while he is alive, and the like or greater laudations when he is dead. Dancing, at first a spontaneous expression of joy in his presence, becomes a ceremonial observance on occasions of worshipping his ghost. And of course it is the same with the accompanying music: instrumental or vocal, it is performed before the natural ruler and the supernatural ruler. Obviously, then, if any of these actions and agencies common to political loyalty and divine worship have characters akin to certain professional actions and agencies, these last named must be considered as having double roots in the politico-ecclesiastical agency. It is also obvious that if, along with increasing differentiation of these twin agencies, the ecclesiastical develops more imposingly and widely, partly because

the supposed superhuman being to which it ministers continually increases in ascribed power, and partly because worship of him, instead of being limited to one place, spreads to many places, these professional actions and agencies will develop more especially in connection with it. . . . . And naturally the agencies of which laudatory orations, hymnal poetry, dramatized triumphs, as well as sculptured and painted representations in dedicated buildings, are products, will develop in connection chiefly with those who permanently minister to the apotheosized rulers—the priests. . . . . A further reason why the professions thus implied, and others not included among them, such as those of the lawyer and the teacher, have an ecclesiastical origin is that the priest-class comes of necessity to be distinguished above other classes by knowledge and intellectual capacity. His cunning, skill, and acquaintance with the nature of things give the primitive priest or medicine-man influence over his fellows; and those traits continue to be distinctive of him when, in later stages, his priestly character becomes distinct. His power as priest is augmented by those feats and products which exceed the ability of the people to achieve or understand; and he is therefore under a constant stimulus to acquire the superior culture and mental powers needed for those activities which we class as professional. Once more there is the often-recognized fact that the priest-class, supplied by other classes with the means of living, becomes, by implication, a leisured class. Not called upon to work for subsistence, its members are able to devote time and energy to that intellectual labor and discipline which are required for professional occupations as distinguished from other occupations."

It will be seen that two different classes of callings, laudatory and scientific, are assumed to have their origin in attention to rulers, either living or dead, and that, according to Spencer's view, attentions and services to dead rulers are so much more important than attentions and services to living rulers that the occupations representing these attentions and services are developed by the representatives of the dead rather than of the living. On the contrary, we shall see reason to doubt that the professional occupations originated or developed exclusively in connection with either living or dead rulers, and that, in so far as

their development and origin were connected with rulers at all, the court hanger-on played a more important part than the medicine-man.

When we come to consider the professions separately we find that the profession of medicine is largely in the hands of the medicine-man to begin with, and we naturally assume that he is the sole practitioner, and that he is the forerunner of the physician, if of any representative of the professional occupations. But while it is true that the medicine-man is in a way a physician, he has not a monopoly of medical practice in his tribe, and he does not practice in all branches of medicine, nor is it apparent that he has conspicuously led the way in the development of a science of medicine. His function is, in fact, a limited one. He is concerned with the practice of magic, and works almost wholly by suggestive means. He relieves pain by pretending to have charmed out or sucked out the *causa nocens;* he brings ill upon other people, and he ascertains by suggestive means who is responsible for the death of a native, or pretends to do so. Alongside the medicine-man there are often lay practitioners, both men and women, who rely more on drugs and surgery than the medicine-man, and who are more in the line of scientific medical practice than the medicine-man himself. This condition of things is very well illustrated among the Araucanians, who "have three kinds of physicians, the *ampives,* the *vileus,* and the *machis.* The *ampives,* a word equivalent to empirics, are the best. They employ in their cures only simples, are skilful herbalists, and have some very good ideas of the pulse, and other diagnostics. The *vileus* correspond to the regular physicians. Their principal theory is that all contagious disorders proceed from insects. . . . . The *machis* are a superstitious class that are to be met with among all the savage nations of both continents. They maintain that all serious disorders proceed from witchcraft, and pretend to cure them by supernatural means, for which reason they are employed in desperate cases, when the exertions of the *ampives* or *vileus* are ineffectual. . . . . They have besides these other kinds of professors of medicine. The first, who may be styled surgeons, are skilful in replacing dislocations, in repairing fractures, and in curing wounds and

ulcers; they are called *gutarve*." Of the Tasmanians, one of the most primitive of all ethnological groups, Bonwick reports that they had various remedies. They relieved inflammation and assuaged the pains of rheumatism by bleeding; pain in the head or stomach was relieved by tight and wet bandages; the *Mesembryanthemum*, or pig-face, and other herbs were used as purgatives; a bath of salt water, or the application of ashes to the skin, was the prescription for cutaneous diseases; drinking copiously of cold water and then lying by the fire was used to promote perspiration; alum was used variously; shampooing, especially with the utterance of favorite charms, was held efficacious in various disorders; cold water was sprinkled on the body in fevers; a decoction of certain leaves was applied to relieve pain; ashes were used for syphilitic sores, and the oil of the mutton-bird for rheumatism; blood was staunched in severe wounds by clay and leaves, while women constantly poured water over the part; leaves of the *Ziera* (stink-weed) were worn around the head to relieve pain; massage was in use; and, on the magical side, various charms and incantations. Among the Hottentots, according to Kolben, there is in every kraal a physician, and in the large ones two, skilled in the botany, surgery, and medicine of the tribe, and chosen by election out of the sages of each kraal to look after the health of the inhabitants. They practice without reward, and keep their preparations very secret. There are also several old women in every kraal who pretend to great skill in the virtues of roots and herbs. These are mortally hated by the doctors. There is also a cattle doctor in every kraal. In Madagascar also there was a popular medicine developed, in connection with which, indeed, the sorcerers played a large part, but the knowledge of the virtues of plants was shared and used by the people in general. They collected the leaves, bark, flowers, and seeds of various plants, several kinds of moss, and grass, tobacco, and capsicum, and understood correctly the aperient, cathartic, diuretic, tonic, and sedative qualities of these.

While not losing sight, then, of the fact that among the groups lowest in culture the medicine-man played the most important rôle of all in medicine, we find here a rude medicine, much of it entirely independent of magic, participated in by both lay

men and women, and derived from the experience of the group as a whole, not through the activities of the medicine-man in particular. And when in the somewhat higher stages of culture we find the medical art more developed and specialized, we certainly do not find that it is the medicine-man or priest who has specialized in this direction, but someone who, unlike the priest, did not have a paying specialty already. Thus in ancient Peru, as Garcilasso de la Vega reports, purges and bleedings were prescribed by those most experienced, who were "generally old women and great herbalists." The herbalists had a great reputation, knew the use of many herbs, and taught their knowledge to their children. "These physicians were not employed to cure anyone but only the king, the royal family, the curacas, and their relatives. The common people had to cure each other from what they had heard concerning the remedies." In Mexico also medicine was found in a surprisingly advanced stage, and to some degree specialized, partly by women, but more especially by a class of men who were not of the priestly class. The Mexican physicians, according to Clavigero, communicated to Dr. Hernandez the knowledge of 1,200 plants, with their proper Mexican names, more than 200 species of birds, and a large number of quadrupeds, reptiles, fish, insects, and minerals. "Europe has been obliged to the physicians of Mexico for tobacco, American balsam, gum copal, liquid amber, sarsaparilla, tecamaca, jalap, barley, and the purgative pine-seeds, and other simples which have been much used in medicine." "Blood-letting, an operation which their physicians performed with great dexterity and safety with the lancets of Itztli, was extremely common among the Mexicans, and other nations of Anahuac;" and Herrera says that the physicians of Guazacualco were for the most part women. The existing evidence in ancient Peru and Mexico indicates that medical practice was still associated with sorcery and superstitious ceremonies, as we should expect to find it (in view of the belief that diseases were spirit-caused), but there had at the same time grown up a body of empirical knowledge, in the hands of specialists, tending to displace the practices of the medicine-man. We may note also that the same state of things existed in Assyria and Babylonia, countries not unlike Mexico in their

general condition of culture: "The doctor had long been an institution in Assyria and Babylonia. It is true that the great bulk of the people had recourse to religious charms and ceremonies when they were ill, and ascribed their sickness to possession by demons instead of to natural causes. But there was a continually increasing number of the educated who looked for aid in their maladies rather to the physician with his medicines than to the sorcerer or priest with his charms" (Sayce).

The assumption of Spencer in connection with evidence such as the last given, that the doctors had arisen as one division of the priestly class, seems unwarranted. The medicine-man and the priest relied almost wholly, as had been said, on suggestion, and before the development of a knowledge of drugs and surgery medicine was almost altogether on the suggestive basis. With the natural development of knowledge, however, in a growing society, the priest, if for no other reason, because there were some limitations to the objects of his attention, continued to work on the suggestive basis, while there arose rival schools of medicine, operating on scientific or empirical principles. It must be noticed also that the priest had never had much prominence in surgery, because this is not favorable to the use of suggestion. Instead, therefore, of contributing conspicuously to the development of a scientific medicine, the medicine-man and priest retained a precarious hold on medical practice until entirely displaced by lay specialists, who relied more on drugs and surgery than on suggestion.

In his treatment of the dancer and musician Spencer shows that music and dancing accompany strong emotion, and were used particularly after victory by those welcoming the warriors home. He also shows that a special class was developed, sometimes women, sometimes men, to dance and sing before chiefs and rulers, and to express admiration and praise for these as well as to amuse them. This proposition is quite true, but it is a far cry from this to the conclusion that the medicine-men, who sang and danced in connection with religious observances, rather than the people in general or the court hangers-on in particular, became differentiated into professional musicians and dancers. There is, in fact, scarcely a shred of evidence to in-

dicate that the priestly class was conspicuously associated in early times with the development of music and dancing. The evidence is all to the contrary. The professionals were plainly not medicine-men, but a class of court hangers-on, corresponding to the troubadours and the troupes of strolling players of early times in Europe, while spontaneous expressions continued to be manifested by the populace in general.

A few examples will illustrate sufficiently the nature of early spontaneous and professional music and dancing and the character of the participants. In 1 Sam. 18:6, 7, we read: "And it came to pass as they came, when David was returned from the slaughter of the Philistine, that the women came out of all cities of Israel, singing and dancing to meet King Saul, with tabrets, with joy, and with instruments of music. And the women answered one another as they played, and said, 'Saul hath slain his thousands and David his ten thousands.'" Somewhat more organized, but still essentially spontaneous, are the dances of the North American Indians. The Iroquois, according to Morgan, had thirty-two distinct dances, and to each a separate object and history was attached as well as a different degree of popular favor. Some were war dances, some costume dances; some designed exclusively for females, others for warriors; but the greater part of them were open to all of both sexes who desired to participate. Both the dancing and the singing were revivals or repetitions of the various activities of the group, particularly of the emotional crises of the group or individual life. In Africa, where despotic forms of government flourish, and a consequent patronage of the arts, we find professional musicians and dancers. These either attach themselves to some court or wander from place to place. A chief usually keeps two or three of them, who sing his praises and those of his white visitors. These singers also attach themselves temporarily to any great man and praise his wit and exploits. But in case the expected presents are not given or are not satisfactory, they then go to the villages round about and retract all that they had previously said of their "protectors." They do a prosperous business, and their wives have more beads, it is said, than the chief's wife. In spite of this they are considered disreputable, and are not allowed the

rite of burial, but their bodies are placed upright in a hollow tree and allowed to rot. Further evidence cited by Spencer shows the importance of the court in encouraging the professional musician and dancer: "Schweinfurth records that at the court of King Munza, the Monbutto ruler, there were professional musicians, ballad-singers, and dancers, whose function it was to glorify and please the king. And in Dahomy, according to Burton, 'the bards are of both sexes, and the women dwell in the palace . . . . ; the king keeps a whole troupe of these laureates. . . . .' In processions in Ashantee, 'each noble is attended by his flatterers, who proclaim, in boisterous songs, the "strong names" of their master;' and on the Gold coast 'every chief has a horn-blower and a special air of his own.' Similarly we learn from Park that among the Mandingos there are minstrels who 'sing extempore songs in honor of their chief men, or any other persons who are willing to give "solid pudding for empty praise."' "

Without multiplying instances from the lower races, we may say that the evidence all goes to show that the patronage of the rich is important or essential to the development of specialists in music and dancing. Following his usual method at this point —that is, the one corresponding with his ghost theory of the origin of worship—Spencer attempts to show that the praised when living became also the praised when dead, and that the praise of the dead became the office of those concerned with the dead, namely, the medicine-men or priests, and that music and dancing were further developed by this class. "Since it was the function of the minstrel now to glorify his chief, and now to glorify his chief's ancestors, we see that in the one capacity he lauded the living potentate, and in the other capacity he lauded the deceased potentate as a priest lauds a deity." But the evidence does not hold out very far along this line. All that can reasonably be claimed is that the church in many places became a very powerful agency, and consequently a powerful patron, and that the offices of the church were promoted in a great degree by music, and in a very slight degree by dancing, and that churchmen, having leisure, taste, and the stimulation to do so, made important contributions, especially in Europe, to the development of music—but not more important than we should expect in view

of the importance of music as a piece of church machinery That the professional musician is a product of attention to the dead rather than the living is a baseless contention, and that the professional dancer is a church product is perhaps the slenderest claim that Spencer anywhere makes on our imagination.

In connection with his view of the relation of the priestly class to the development of poets, orators, dramatists, and actors, Spencer says: "Ovations, now to the living king and now to the dead king, while taking saltatory and musical forms, took also verbal forms, originally spontaneous and irregular, but presently studied and measured: whence, first, the unrhythmical speech of the orator, which under higher emotional excitement grew into the rhythmical speech of the priest-poet, chanting verses—verses that finally became established hymns of praise. Meanwhile from accompanying rude imitation of the hero's acts, performed now by one and now by several, grew dramatic representations, which, little by little elaborated, fell under the regulations of a chief actor, who prefigured the playwright. And out of these germs, all pertaining to worship, came eventually the various professions of poets, actors, dramatists, and the subdivisions of these."

In this relation, as constantly in his whole discussion, Spencer seeks a more remote and complex explanation when there is a simpler one at hand. Races so low in the scale of organization that they have no political rulers both make and recite and act poems and dramas; and if this it not connected with "living potentates," it is much the more not connected with "dead potentates." It is perhaps true that there is not a lower race in existence today than the central Australians, and yet among them Mr. Baldwin Spencer and Mr. F. J. Gillen were present on the occasion of one of the gatherings in connection with the initiation of the young men, commencing in the middle of September and lasting until the middle of the following January, during which time there was a constant succession of essentially dramatic ceremonies, not a day passing without one, while there were sometimes as many as five or six during the twenty-four hours. These ceremonies or *quabara* related to the wanderings of the alcheringa, or mythical ancestors of the tribe; each ceremony

was the property of some individual who either made it himself or inherited it from someone—generally a father or elder brother—and it could be acted only by his permission. A single instance will suffice to illustrate the crude but dramatic character of these performances: "[The men] were supposed to represent two eagle-hawks quarreling over a piece of flesh, which was represented by the downy mass in one man's mouth. At first they remained squatting on their shields, moving their arms up and down, and still continuing this action, which was supposed to represent the flapping of wings, they jumped off the shields, and with their bodies bent up and arms extended and flapping, began circling around each other as if each were afraid of coming to close quarters. Then they stopped and moved a step or two at a time, first to one side and then to the other, until finally they came to close quarters and began fighting with their heads for the possession of the piece of meat. . . . . The attacking man at length seized with his teeth the piece of meat and wrenched it out of the other man's mouth. The acting in this ceremony was especially good, the actions and movements of the birds being admirably represented, and the whole scene with the decorated men in front and the group of interested natives in the background was by no means devoid of picturesqueness."

It is well known also that the North American Indians produced some very tender poems of love and sentiment; and there are several delicate nature poems in the poetry of the Eskimo. Neither does the prose literature of the natural races show the influence of the medicine-man which Spencer alleges; Mr. Ellis's chapters on the proverbs, fables, and folklore of the Africans of the Slave Coast show no signs of connection with the medicine-man. The stories remind us sometimes of the stories of Uncle Remus and sometimes of Grimm's fairy-tales: "The fables in vogue amongst the Ewe-speaking people, and of which there are a great number, are always material, and in no way connected with metaphor. They are tales pure and simple, are not designed to account for events or phenomena in nature or life, and have no analogy with the moral fables which were once popular in Europe, and of which those of Æsop afford an ensample. They are merely stories of the adventures of beasts and

birds, to whom the Ewe-speaking native ascribes a power of speech, and whose moral nature he conceives to be at least as analogous to that of man as their physical nature. . . . . The fables are usually recounted on moonlight nights, when the young people of the town or village gâther together in one of the open spaces amongst the houses. It is usual for the story-teller to be accompanied by the sound of a drum, whose rhythm occurs after each sentence."

There is, in fact, almost no end to the instances of poetry and drama and literature under conditions which preclude the assumption that they were produced by priests or directed toward great men. But in connection with literature, as with music and dancing, we find that wherever court life and consequently court patronage existed professional poets and actors were developed. These naturally sang the praises of their patrons, but they were, for the most part, laymen, and not priests, and their art celebrated the living, and not the dead. The ancient kingdoms of Mexico and Peru represent highly developed political and ecclesiastical control, but the literature of these countries does not show marked priestly influences. Of the ancient Nahuatl poetry Brinton says: "The profession of poet stood in highest honor. It was the custom before the Conquest for every town, every ruler, and every person of importance to maintain a company of singers, and dancers, paying them fixed salaries, and the early writer, Duran, tells us that this custom continued in his own time, long after the Conquest. . . . . In the training of these artists their patrons took a deep personal interest, and were not at all tolerant of neglected duties. We are told that the chief selected the song which was to be sung and the tune by which it was to be accompanied; and did any one of the choir sing falsely, a drummer beat out of time, or a dancer strike an incorrect attitude, the unfortunate artist was instantly called forth, placed in bonds and summarily executed the next morning.

"The antiquary Boturini, writing about two centuries after the Conquest, classified all the ancient Nahuatl songs under two heads, those treating mainly of historical subjects, and those of a fictitious, emotional, or imaginative character."

About the same state of literature is reported by Garcilasso

among the Peruvians: "The *Amautas*, who were philosophers, were not wanting in ability to compose comedies and tragedies, which were represented before their kings on solemn festivals, and before the lords of the court. The actors were not common people, but Yncas and noblemen, sons of Curacas, or the Curacas themselves, down to masters of the camp. For the subject-matter of the tragedy should, it was considered, be properly represented, as it always related to military deeds, triumphs, and victories, or to the grandeur of former kings and other heroic men. The arguments of the comedies were on agriculture and familiar household subjects. . . . . They did not allow improper or vile farces. . . . . They understood the composition of long and short verses, with the right number of syllables in each. Their love songs were composed in this way, with different tunes. . . . . They also recorded the deeds of their kings in verse, and those of other famous Yncas and Curacas. . . . . They did not use rhymes in the verses, but all were blank. . . . . Other verses are on the subject of astrology; and the Ynca poets treated of the secondary causes, by means of which God acts in the region of the air, to cause lightning and thunder, hail, snow, and rain."

We find, indeed, some signs of priestly influence and of remembrance of the dead in the poems of these two countries, but the relation between patron and court attendant is so plain, and the nature of the poetic subjects treated so varied, as to preclude the theory that the ecclesiastic is the dominant influence.

After confessing in this connection that among various groups, notably some African tribes and the nomads of Asia, "eulogies of the living ruler, whether or not with rhythmical words and musical utterance, are but little or not at all accompanied by eulogies of the apotheosized ruler," Spencer passes on to some of the higher stages of development, and shows that among the Egyptians, Greeks, and Christians the arts in question were practiced by the priesthood. And all that he claims may be admitted, or at any rate there is no occasion to question the evidence that the priests were concerned with the production of poetry and literature; for here, as in the case of music, the church availed itself of all the modes of suggestion and all the

emotional helps within its reach. It is a mistake to assume, however, that this development in the church was later in point of time or more important than the corresponding development in the world. The true statement seems to be that these forms of art developed naturally both in the world and in the church, as answering to the needs of human nature; and the church may be regarded as a microcosm, reproducing in small the activities of the world, or at any rate those activities essential to its own maintenance. A passage in Clavigero illustrates that priests did *various* things, *some of them artistic*, contributing to the up-keep of the church: "All the offices of religion were divided among the priests. Some were the sacrificers, others the diviners; some were the composers of hymns, others those who sung. Amongst the singers some sang at certain hours of the day, others sang at certain hours of the night. Some priests had the charge of keeping the temple clean, some took care of the ornaments of the altars; to others belonged the instructing of youth, the correcting of the calendar, the ordering of festivals, and the care of mythological paintings."

The church is here a patron of the arts, and the arts flourish under patronage. Under certain conditions, particularly with the dominance of theocratic ideas, the church may become a more powerful patron than the court or the world at large. The reflective, speculative, and artistic interests of society may even become identified to a large degree with the church and be fostered by it, while the motor activities are appropriated by the court and the world at large. In mediaeval and feudal Europe the church became a temporal power, and in consequence a very powerful patron; and it did appropriate and represent certain characteristic mental interests, owing to peculiar conditions in the world at large. Among these interests were reading and writing. And, as Spencer points out, many churchmen were contributors to poetry; and the church developed also a body of dramatic literature of very slight artistic value. But to say nothing of the fact that churchmen alone were able to read and write, and that consequently their productions had the best chance to survive, the array of names of churchmen connected with literature in England which Spencer presents is not at all

impressive, and is besides meaningless, since on the principle which he follows of naming only poets and literary men who are at the same time churchmen it would be equally possible to show that there was never a novelist in England who was not at the same time a lawyer, or that all British poets have blue eyes.

In his treatment of the beginnings of painting, sculpture, and architecture, Spencer has singled out a slight and, so to speak, incidental connection which these arts have with spirit belief and the medicine-man, and has greatly overstated its importance: "Unquestionably . . . . pictorial art in its first stages was occupied with sacred subjects, and the priest, when not himself the executant, was the director of the executants. . . . .

"A rude carved or model image of a man placed on his grave gave origin to the sculptured representation of the god inclosed in his temple. A product of priestly skill at the outset, it continued in some cases to be such among early civilized peoples; and always thereafter, when executed by an artisan, conformed to priestly direction. Extending presently to the representation of other than divine and semi-divine personages, it eventually thus passed into its secularized form. . . . .

"The art [of architecture] was first used either for the preservation of the dead or as ancillary to ceremonies in honor of the apotheosized dead. In either case the implication is that architecture in these simple beginnings fulfilled the ideas of the primitive medicine-men, or priests. Some director there must have been; and we can scarcely help concluding that he was at once the specially skilful man and the man who was supposed to be in communication with the departed spirits to be honored."

These are among the conclusions which Spencer says "leap to the eyes;" but in this neither the lay reader nor the student of these matters will probably agree with him. The interest in reviving in consciousness the emotional aspects of past activity, which we have seen in the arts of poetry and music, is common also to painting and sculpture. Spencer was familiar with the etchings and carvings of the prehistoric cave-men, and it is difficult to conceive that he counted these records of hunting activity and interests among the products of the medicine-men. There are, besides, among the natural races of today, particularly among

the Australians and Africans, numerous rock carvings and paintings. Among the Bushmen are found thousands of animal forms, often twenty on a single stone. They use in the painting a lively red, brown ochre, yellow, and black, and occasionally green. The subjects are men and animals. One especially fine piece represents a fight between the Bushmen and Kafirs, in connection with a cattle raid which the former had made on the latter. Art of this character, we may believe, has no especial connection with the medicine-man. The person who scratched on a mammoth's tusk a representation of a vicious-looking mammoth was pretty certainly no medicine-man, but one of the men foremost in the hunt, in whose imagination and memory the picture stuck. The connection which the medicine-man has with the art of sculpture and painting is a secondary one—the manufacture of images of other men to be used magically in bringing disaster on these men. This is essentially a fetishistic practice, and cannot be regarded as having a very far-reaching influence in art. It was as prevalent in the Middle Ages as among savages, and in neither case had a serious influence on art. As to architecture, that this originated in the construction of tombs is a conclusion so far from "leaping to the eyes" that quite the contrary takes place; and we shall not go far astray if we decide that architecture originated in the construction of habitations for the living, rather than tombs for the dead. Even the lower animals, notably the beaver and the bower-bird, have made a beginning in architecture, while making no special provision for the dead. It is, besides, in keeping with Spencer's ghost theory of worship that no attentions to the dead shall be found which are not foreshadowed in attentions to the living, and in accordance with this view we should expect him to claim that the tendency to build imposing structures is to be looked for, as in fact it is, in connection with political centralization and court life. The earliest imposing structures in the way of fortifications and strongholds represent the needs of the living, not of the dead; the castle precedes the cathedral, and the builder in either case is the result of patronage, not of priestly predisposition. This is by no means denying that the church made particular uses of architecture and that churchmen made notable contributions to it. But in these cases, as in

the others, the simplest assumption is the safest, and is sustained by the mass of evidence. As soon as there developed at any point, either at the court or in the church, an amount of wealth making the support of a class of professionals possible, these appeared. This condition is seen first of all in connection with court life, and is very well illustrated in old Mexico: "Netzahualcoyotzin ordered all artists to make his likeness. . . . . The goldsmiths made a golden statue, the feather-workers manufactured a portrait so like that it seemed to be living, the painters made another, the sculptors made his statue, and the architects erected a lion . . . . which had his figure; even the blacksmiths made their work."

Both the court and the church used the arts for their own glorification, and in some historical periods the church is preeminently the patron of the arts; but the arts originated in common consciousness; their connection with church and state is adventitious, and dependent on economic rather than psychological principles.

In explaining the origin of the historian, Spencer says: "The great deeds of the hero-god, recited, chanted or sung, and mimetically rendered, naturally came to be supplemented by details, so growing into accounts of his life; and thus the priest-poet gave origin to the biographer, whose narratives, being extended to less sacred personages, became secularized. Stories of the apotheosized chief or king, joined with stories of his companions and amplified by narratives of accompanying transactions, formed the first histories."

But men in very early times invented means of keeping a record of their activities and of past events, and in this, rather than in the praise of apotheosized chiefs, we find the beginning of history. The Indian wampum is an example of a device of this kind. "The laws explained at different stages of the ceremonial were repeated from strings of wampum, into which they 'had been talked' at the time of their enactment. In the Indian method of expressing the idea, the string or the belt can tell, by means of an interpreter, the exact law or transaction of which it was made at the time the sole evidence." A still simpler device is reported of the Chippewas by Schoolcraft: "A subordinate here handed

him, at his request, a bundle of small sticks. 'This,' handing them to me, 'is the number of Leech Lake Chippewas killed by the Sioux since the treaty of Prairie du Chien.' There were 43 sticks." And a more elaborate development than wampum was the *quipu*, or knot-writing, of the ancient Peruvians.

The stimulation to historical and biographical interest is, however, found mainly in connection with great men who are pleased to have themselves and their deeds glorified. Historical writing is consequently developed mainly at the court; the ruler was its object, and out of the hangers-on was developed a class of specialists in this line. The beginnings of this we see very clearly in Africa, where the king of the Zulus kept men who acted as heralds at the dances, and "at every convenient opportunity recounted the various acts and deeds of their august monarch in a string of unbroken sentences;" and among the Dahomans, where on special occasions professional singers, sitting at the king's gate, rehearse the whole history of the country, the recital taking up several days. On the Slave Coast there are "*arokin*, or narrators of the national traditions, several of whom are attached to each king, or paramount chief, and who may be regarded as the depositaries of the ancient chronicles. The chief of the *arokin* is a councillor, bearing the title of *Ologbo*, 'one who possesses the old times,' and a proverb says, '*Ologbo* is the father of chroniclers.'" At the stage of culture reached by the ancient Mexicans the profession of historian is already fully developed: "It ought to be known that in all the republics of this country . . . . there was, amongst other professions, that of the chroniclers and historians. They possessed a knowledge of the earliest times, and of all things concerning religion, the gods and their worship. They knew the founders of cities and the early history of their kings and kingdoms. They knew the modes of election and the right of succession; and they could tell the number and characters of their ancient kings, their works and memorable achievements, whether good or bad, and whether they had governed well or ill. . . . . They knew, in fact, whatever belonged to history, and were able to give an account of all the events of the past. . . . . These chroniclers had, likewise, to calculate the days, months, and years; and, though they had no

writing like our own, they had their symbols and characters through which they understood everything. . . . . There was never a lack of those chroniclers. It was a profession which passed from father to son, highly respected in the whole republic; each historian instructed two or three of his relatives. He made them practice constantly, and they had recourse to him whenever a doubt arose on a point of history. . . . . Whenever there was a doubt as to ceremonies, precepts of religion, religious festivals, or anything of importance in the history of the ancient kingdoms, everyone went to the chroniclers to ask for information" (Las Casas).

From evidence of this character we find that the original narrator of historical events and personal history was not usually a priest, and in the more advanced stages of development, as shown in the last citation, it does not appear that the historians are from the priestly class. At the same time it is true that the priests had special interest in being in possession of historical knowledge, in order to further their own interests. Bastian reports that "the only kind of history which is found among the Congo people is the traditions of important events, which are secretly transmitted among the fetish-priests, in order, through the knowledge of the past of different families, to make the people who come to them for advice imagine that they possess supernatural knowledge." From the same motives of self-interest the church at all times, and perhaps pre-eminently the Christian church in Europe, has used history and created supposed history (to-wit, miracle) both to preserve and to magnify its past. On this account we may well expect to find that when the church is powerful and able, like the court, to support a number of hangers-on, its representatives will have a prominent place in history and in letters; and of course this was particularly true in Europe during the period when the church had a monopoly of learning. But this participation of the clergy in a general activity is quite different from the claim that history is a priestly creation. An interest in the past is common to human nature, and wherever there was an economic surplus applicable to the cultivation of this interest a class of men sprang up who cultivated it. The economic conditions were met primarily by the

court and secondarily by the church, and either of these alone would have developed historians and men of letters.

Finally, we may examine together Spencer's claims that the teacher, the philosopher, the judge, and the scientist are of ecclesiastical origin, because there is, perhaps, more to be said in favor of his theory as applied to these occupations than the others, medicine excepted. Yet Spencer's claim with reference to these is also fundamentally unsound. He says that "the primitive conception of the teacher is the conception of one who gives instruction in sacred matters. Of course the knowledge thus communicated is first of all communicated by the elder priests to the younger, or rather by the actual priests to those who are to become priests. In many cases, and for a long time, this is the sole teaching. Only in the course of evolution, along with the rise of a secular cultured class, does the teacher as we now conceive him come into existence."

Spencer also alleges that in the initiatory ceremonies of the Australians the youth is dedicated to a god, and that the medicine-men are the operators and instructors during the ceremony. These statements, as they stand, are unquestionably incorrect. The most important evidence bearing on initiatory ceremonies among the Australians, that of Spencer and Gillen, to which reference has been made, had not appeared when Spencer wrote. In this work we have, in fact, the first exhaustive and satisfactory account of these ceremonies, and among the Central Australian tribes, to whom the description is limited, the initiatory ceremonies are a very remarkably well organized and successful attempt to teach the young men the traditions of the tribe and to bring them under the influence and control of the older men. The old men, particularly those distinguished by their superior knowledge and good sense, are the teachers and operators during these ceremonies, one part of which, it will be remembered, lasts about four months. The medicine-men, as such, do not appear at all, but all possible suggestive means are employed, and with an almost endless repetition, to impress the youth with respect for the older men of his tribe and for his alcheringa or mythical ancestors.

"It may be noted here that the deference paid to the old men

during the ceremonies of examining the churinga is most marked; no young man thinks of speaking unless he be first addressed by one of the elder men, and then he listens solemnly to all that the latter tells him. . . . . The old man just referred to was especially looked up to as an oknirabata or great instructor, a term which is only applied, as in this case, to men who are not only old, but learned in all the customs and traditions of the tribe, and whose influence is well seen at ceremonies such as the engwura [fire-ceremony], where the greatest deference is paid to them. A man may be old, very old indeed, but yet never attain to the rank of oknirabata."

On the other hand, it is remarkable that the only instance of levity recorded by Spencer and Gillen was in connection with the churinga (sacred object) of an oruncha or "devil-man"—one of the three classes of medicine men—"and on the production of this there was, for the first and only time, general though subdued laughter." The medicine-men of the other classes were held in respect, practiced sorcery of various kinds, and in some cases taught their arts to others, but they figured in no way in the general education of the youth. In other parts of Australia some participation of the medicine-man in the ceremonies of initiation is found, but this is slight.

With reference to the other three professions named, that of philosopher, that of judge, and that of scientist, we may say, in brief, that the first form of philosophy is the mythology growing out of the attempt of primitive man to understand such phenomena as echoes, clouds, stars, thunder, wind, shadows, dreams, etc. The creation of a mythology is not the work of a medicine-man alone, but the work of the social mind in general. Among the first forms of science are the number, time, and space conceptions, and a vague body of experiential knowledge growing out of the general activities of the group or the individuals of the group, and essential to the control of these activities and the development of new and more serviceable habits. The first decision of cases was made by old men, and later by men in authority, particularly those to whom pre-eminent ability, particularly in war, gave uncommon authority; and these were first of all rulers rather than priests.

A particular reason, however, for the development of the teacher, the philosopher, the judge, and the scientist within the church is found in the fact that they were peculiarly fitted to further the needs and claims of the church. The medicine-man, as we have seen, operated by means of suggestion, and the church in all times and without interruption has operated on the same basis. The medicine-man claimed that he had connection with spirits, claimed to mediate spirit intervention, and claimed superior knowledge from spirits. The church made all these claims, and hence its knowledge and utterances were regarded as inspired. Aided by this inspirational claim, the church in several quarters of the world grew more powerful than the temporal powers, and developed within itself many special agents. Europe, as is well known, passed through a period of dominance by ecclesiastical forces, and in this period the offices of teacher, philosopher, judge, and scientist were in great part assumed by the church; for inspired teachers and thinkers naturally outclassed uninspired teachers and thinkers. And if we accept the power of the church as a fact in early European history, and have in mind the necessity of patronage to the development of professional life, we are not surprised to find that the functions of thinking, teaching, and judging were specially claimed and developed by the church. But these functions originated in society at large, their emphasis in the church is adventitious (if the assumption of temporal power by the church may itself be called adventitious), and they pass again into the hands of the lay specialists whenever the world at large becomes again a more powerful patron than the church.

The most general explanation of the rise of the professional occupations is that they need patronage; and when either the court or the church is developed the patronage is at hand. With the division of labor incident to a growing society, and the consequent increasing irksomeness of labor, particularly of "hard labor," there are always at hand a large number of men to do the less irksome work. Both the court hanger-on class and the priest class have, under the patronage of the court and of the church, furthered the development of the learned and artistic professions, and some of the professions have received more

encouragement than others from the church because their presence favored the needs and claims of the church. But their development must be regarded as a phase of the division of labor, dependent on economic conditions rather than on the presence in society of any particular set of individuals or any peculiar psychic attitude of this set.—W. I. THOMAS, *Decennial Publications of the University of Chicago,* First Series 4:241–56.

THE GROWTH OF INDIAN MYTHOLOGIES

In a collection of Indian traditions recently published ("Indianische Sagen von der Nord-Pacifischen Küste Nordamerikas," Berlin, A. Asher & Co.), I have discussed the development of the mythologies of the Indians of the North Pacific Coast. I will, in the following paper, briefly sum up the results at which I arrived in my investigation, and try to formulate a number of principles which, it seems to me, may be derived from it, and which, I believe, ought to be observed in all work on mythologies and customs of primitive people.

The region with which I deal, the North Pacific coast of our continent, is inhabited by people diverse in language but alike in culture.

The arts of the tribes of a large portion of the territory are so uniform that it is almost impossible to discover the origin of even the more specialized forms of their productions inside of a wide expanse of territory. Acculturation of the various tribes has had the effect that the plane and the character of the culture of most of them is the same; in consequence of this we find also that myths have travelled from tribe to tribe, and that a large body of legends belongs to many in common.

As we depart from the area where the peculiar culture of the North Pacific coast has reached its highest development, a gradual change in arts and customs takes place, and, together with it, we find a gradual diminution in the number of myths which the distant tribe has in common with the people of the North Pacific coast. At the same time, a gradual change in the incidents and general character of the legends takes place.

We can in this manner trace what we might call a dwindling

down of an elaborate cyclus of myths to mere adventures, or even to incidents of adventures, and we can follow the process step by step. Wherever this distribution can be traced, we have a clear and undoubted example of the gradual dissemination of a myth over neighboring tribes. The phenomena of distribution can be explained only by the theory that the tales have been carried from one tribe to its neighbors, and by the tribe which has newly acquired them in turn to its own neighbors. It is not necessary that this dissemination should always follow one direction; it may have proceeded either way. In this manner a complex tale may dwindle down by gradual dissemination, but also new elements may be embodied in it.

It may be well to give an example of this phenomenon. The most popular tradition of the North Pacific coast is that of the raven. Its most characteristic form is found among the Tlingit, Tsimshian, and Haida. As we go southward, the connection between the adventures becomes looser and their number less. It appears that the traditions are preserved quite fully as far south as the north end of Vancouver Island. Farther south the number of tales which are known to the Indians diminishes very much. At Newettee, near the north point of Vancouver Island, thirteen tales out of a whole of eighteen exist. The Comox have only eight, the Nootka six, and the Coast Salish only three. Furthermore, the traditions are found at Newettee in the same connection as farther north, while farther south they are very much modified. The tale of the origin of daylight, which was liberated by the raven, may serve as an instance. He had taken the shape of a spike of a cedar, was swallowed by the daughter of the owner of the daylight, and then born again; afterwards he broke the box in which the daylight was kept. Among the Nootka, only the transformation into the spike of a cedar, which is swallowed by a girl and then born again, remains. Among the Coast Salish the more important passages survive, telling how the raven by a ruse compelled the owner of the daylight to let it out of the box in which he kept it. The same story is found as far south as Grey's Harbor in Washington. The adventure of the pitch, which the raven kills by exposing it to the sunshine, intending to use it for caulking his canoe, is found far south, but in an en-

tirely new connection, embodied in the tradition of the origin of sun and moon.

But there are also certain adventures embodied in the raven myths of the north which probably had their origin in other parts of America. Among these I mention the tale how the raven was invited and reciprocated. The seal puts his hands near the fire, the grease drips out of them into a dish which he gives to the raven. Then the latter tries to imitate him, but burns his hands, etc. This tale is found, in one or the other form, all over North America, and there is no proof that it originally belonged to the raven myth of Alaska. For other examples I refer to my book.

I believe the proposition that dissemination has taken place among neighboring tribes will not encounter any opposition. Starting from this point, we will make the following considerations:—

If we have a full collection of the tales and myths of all the tribes of a certain region, and then tabulate the number of incidents which all the collections from each tribe have in common with any selected tribe, the number of common incidents will be the larger the more intimate the relation of the two tribes and the nearer they live together. This is what we observe in a tabulation of the material collected on the North Pacific coast. On the whole, the nearer the people, the greater the number of common elements; the farther apart, the less the number.

But it is not the geographical location alone which influences the distribution of tales. In some cases, numerous tales which are common to a certain territory stop short at a certain point, and are found beyond it in slight fragments only. These limits do not by any means coincide with the linguistic divisions. An example of this kind is the raven legend, to which I referred before. It is found in substantially the same form from Alaska to northern Vancouver Island; when it suddenly disappears almost entirely, and is not found among the southern tribes of Kwakiutl lineage, nor on the west coast of Vancouver Island, although the northern tribes, who speak the Kwakiutl language, have it. Only fragments of these legends have strayed farther south, and their number diminishes with increasing distance. There must be a

cause for such a remarkable break. A statistical inquiry shows that the northern traditions are in close contact with the tales of the tribes as far south as the central part of Vancouver Island, where a tribe of Salish lineage is found; but farther they do not go. The closely allied tribes immediately south do not possess them. Only one explanation of this fact is possible, viz., lack of acculturation, which may be due either to a difference of character, to continued hostilities, or to recent changes in the location of the tribes, which has not allowed the slow process of acculturation to exert its deep-going influence. I consider the last the most probable cause. My reason for holding this opinion is that the Bilxula, another Salish tribe, who have become separated from the people speaking related languages and live in the far north, still show in their mythologies the closest relations to the southern Salish tribes, with whom they have many more traits in common than their neighbors to the north and to the south If their removal were a very old one, this similarity in mythologies would probably not have persisted, but they would have been quite amalgamated by their new neighbors.

We may also extend our comparisons beyond the immediate neighbors of the tribes under consideration by comparing the mythologies of the tribes of the plateaus in the interior, and even of those farther to the east with those of the coast. Unfortunately, the available material from these regions is very scanty. Fairly good collections exist from the Athapascan, from the tribes of Columbia River and east of the mountains, from the Omaha, and from some Algonquin tribes. When comparing the mythologies and traditions which belong to far-distant regions, we find that the number of incidents which they have in common is greater than might have been expected; but some of those incidents are so general that we may assume that they have no connection, and may have arisen independently. There is, however, one very characteristic feature, which proves beyond cavil that this is not the sole cause of the similarity of tales and incidents. We know that in the region under discussion two important trade routes reached the Pacific coast, one along the Columbia River, which connected the region inhabited by Shoshonean tribes with the coast and indirectly led to territories occupied by Siouan and

Algonquin tribes; another one which led from Athapascan territory to the country of the Bilxula. A trail of minor importance led down Fraser River. A study of the traditions shows that along these routes the points of contact of mythologies are strongest, and rapidly diminish with increasing distances from these routes. On Columbia River, the points of contact are with the Algonquin and Sioux; among the Bilxula they are with the Athapascan. I believe this phenomenon cannot be explained in any other way but that the myths followed the line of travel of the tribes, and that there has been dissemination of tales all over the continent. My tabulations include the Micmac of Nova Scotia, the Eskimo of Greenland, the Ponca of the Mississippi Basin, and the Athapascan of the Mackenzie River, and the results give the clearest evidence of extensive borrowing.

The identity of a great many tales in geographically contiguous areas has led me to the point of view of assuming that wherever a greater similarity between two tales is found in North America, it is more likely to be due to dissemination than to independent origin.

But without extending these theories beyond the clearly demonstrated truths of transmission of tales between neighboring tribes, we may reach some further conclusions. When we compare, for instance, the legend of the culture hero of the Chinook and that of the origin of the whole religious ceremonial of the Kwakiutl Indians, we find a very far-reaching resemblance in certain parts of the legends which make it certain that these parts are derived from the same source. The grandmother of the divinity of the Chinook, when a child, was carried away by a monster. Their child became the mother of the culture hero, and by her help the monster was slain. In a legend from Vancouver Island, a monster, the cannibal spirit, carries away a girl, and is finally slain by her help. Their child becomes later on the new cannibal spirit. There are certain intermediate stages of these stories which prove their identity beyond doubt. The important point in this case is that the myths in question are perhaps the most fundamental ones in the mythologies of these two tribes. Nevertheless, they are not of native growth, but, partly, at least, borrowed. A great many other important legends prove

to be of foreign origin, being grafted upon mythologies of various tribes. This being the case, I draw the conclusion that the mythologies of the various tribes as we find them now are not organic growths, but have have gradually developed and obtained their present form by accretion of foreign material. Much of this material must have been adopted ready-made, and has been adapted and changed in form according to the genius of the people who borrowed it. The proofs of this process are so ample that there is no reason to doubt the fact. We are, therefore, led to the conclusion that from mythologies in their present form it is impossible to derive the conclusion that they are mythological explanations of phenomena of nature observed by the people to whom the myths belong, but that many of them, at the place where we find them now, never had such a meaning. If we acknowledge this conclusion as correct, we must give up the attempts at off-hand explanation of myths as fanciful, and we must admit that, also, explanations given by the Indians themselves are often secondary, and do not reflect the true origin of the myths.

I do not wish to be misunderstood in what I said. Certainly, the phenomena of nature are at the bottom of numerous myths, else we should not find sun, moon, clouds, thunder-storm, the sea and the land play so important a part in all mythologies. What I maintain is only that the specific myth cannot be simply interpreted as the result of observation of natural phenomena. Its growth is much too complex. In most cases the present form has undergone material change by disintegration and by accretion of foreign material, so that the original underlying idea is, at best, much obscured.

Perhaps the objection might be raised to my argument that the similarities of mythologies are not only due to borrowing, but also to the fact that, under similar conditions which prevail in a limited area, the human mind creates similar products. While there is a certain truth in this argument so far as elementary forms of human thought are concerned, it seems quite incredible that the same complex theory should originate twice in a limited territory. The very complexity of the tales and their gradual dwindling down to which I have referred before,

cannot possibly be explained by any other method than by dissemination. Wherever geographical continuity of the area of distribution of a complex ethnographical phenomenon is found, the laws of probability exclude the theory that in this continuous area the complex phenomenon has arisen independently in various places, but compels us to assume that in its present complex form its distribution is due to dissemination, while its composing elements may have originated here and there.

It may be well to dwell on the difference between that comparative method which I have pursued in my inquiry and that applied by many investigators of ethnographical phenomena. I have strictly confined my comparisons to contiguous areas in which we know intercourse to have taken place. I have shown that this area extends from the Pacific coast to considerable distances. It is true that the mythologies of the far east and the extreme northeast are not as well connected with those of the Pacific coast by intermediate links as they might be, and I consider it essential that a fuller amount of material from intermediate points be collected in order that the investigation which I have begun may be carried out in detail. But a comparison of the fragmentary notes which we possess from intermediate points proves that most of those tales which I have enumerated as common to the east, to the north, and to the west, will be found covering the whole area continuously. Starting from this fact, we may be allowed to argue that those complex tales which are now found only in isolated portions of our continent either are actually continuous but have not been recorded from intermediate points; or that they have become extinct in intermediate territory; or, finally, that they were carried over certain areas accidentally, without touching the intermediate field. This last phenomenon may happen, although probably not to a very great extent. I observed one example of this kind on the Pacific coast, where a tale which has its home in Alaska is found only in one small group of tribes on southern Vancouver Island, where, as can be proved, it has been carried either by visitors or by slaves.

The fundamental condition, that all comparisons must be based on material collected in contiguous areas, differentiates our method from that of investigators like Petitot and many

others, who see a proof of dissemination or even of blood relationship in each similarity that is found between a certain tribe and any other tribe of the globe. It is clear that the greater the number of tribes which are brought forward for the purposes of such comparisons, the greater also the chance of finding similarities. It is impossible to derive from such comparisons sound conclusions, however extensive the knowledge of literature that the investigator may possess, for the very reason that the complex phenomenon found in one particular region is compared to fragmentary evidence from all over the world. By means of such comparisons, we can expect to find resemblances which are founded in the laws of the development of the human mind, but they can never be proofs of transmission of customs or ideas.

In the Old World, wherever investigations on mythologies of neighboring tribes have been made, the philological proof has been considered the weightiest, *i. e.*, when, together with the stories, the names of the actors have been borrowed, this has been considered the most satisfactory proof of borrowing. We cannot expect to find such borrowing of names to prevail to a great extent in America. Even in Asia, the borrowed names are often translated from one language into the other, so that their phonetic resemblance is entirely destroyed. The same phenomenon is observed in America. In many cases, the heroes of myths are animals, whose names are introduced in the myth. In other cases, names are translated, or so much changed according to the phonetic laws of various languages, that they can hardly be recognized. Cases of transmission of names are, however, by no means rare. I will give only a few examples from the North Pacific coast.

Almost all the names of the Bilxula mythology are borrowed from the Kwakiutl language. A portion of the great religious ceremony of the Kwakiutl has the name "tlokwala." This name, which is also closely connected with a certain series of myths, has spread northward and southward over a considerable distance. Southward we find it as far as the Columbia River, while to the north it ceases with the Tsimshian; but still farther north another name of a part of the ceremonial of the Kwakiutl is substituted, viz., "nontlem." This name, as designating the cere-

monial, is found far into Alaska. But these are exceptions; on the whole, the custom of translating names and of introducing names of animals excludes the application of the linguistic method of investigating the borrowing of myths and customs.

We will consider for a moment the method by which traditions spread over contiguous areas, and I believe this consideration will show clearly that the standpoint which I am taking, viz., that similarity of traditions in a continuous area is always due to dissemination, not to independent origin, is correctly taken. I will exemplify this also by means of the traditions of the North Pacific coast, more particularly by those of the Kwakiutl Indians.

It seems that the Kwakiutl at one time consisted of a number of village communities. Numbers of these village communities combined and formed tribes; then each village community formed a clan of the new tribe. Owing probably to the influence of the clan system of the northern tribes, totems were adopted, and with these totems came the necessity of acquiring a clan legend. The social customs of the tribe are based entirely upon the division into clans, and the ranking of each individual is the higher—at least to a certain extent—the more important the legend of his clan. This led to a tendency of building up clan legends. Investigation shows that there are two classes of clan legends: the first telling how the ancestor of the clan came down from heaven, out of the earth, or out of the ocean; the second telling how he encountered certain spirits and by their help became powerful. The latter class particularly bear the clearest evidence of being of a recent origin; they are based entirely on the custom of the Indians of acquiring a guardian spirit after long-continued fasting and bathing. The guardian spirit thus acquired by the ancestor became hereditary, and is to a certain extent the totem of the clan,—and there is no doubt that these traditions, which rank now with the fundamental myths of the tribe, are based on the actual fastings and acquisitions of guardian spirits of ancestors of the present clans. If that is so, we must conclude that the origin of the myth is identical with the origin of the hallucination of the fasting Indian, and this is due to suggestion, the material for which is furnished by the tales of other Indians, and traditions referring to the spiritual

world which the fasting Indian may have heard. There is, therefore, in this case a very strong psychological reason for involuntary borrowing from legends which the individual may have heard, no matter from what source they may have been derived. The incorporation in the mythology of the tribe is due to the peculiar social organization which favors the introduction of any myth of this character if it promises to enhance the social position of the clan.

The same kind of suggestion which I mentioned here has evidently moulded the beliefs in a future life. All myths describing the future life set forth how a certain individual died, how his soul went to the world of the ghosts, but returned for one reason or the other. The experiences which the man told after his recovery are the basis of the belief in a future life. Evidently, the visions of the sick person are caused entirely by the tales which he had heard of the world of the ghosts, and the general similarity of the character of this tale along the Pacific coast proves that one vision was always suggested by the other.

Furthermore, the customs of the tribes are such that by means of a marriage the young husband acquires the clan legends of his wife, and the warrior who slays an enemy those of the person whom he has slain. By this means a large number of traditions of the neighboring tribes have been incorporated in the mythology of the Kwakiutl.

The psychological reason for the borrowing of myths which do not refer to clan legends, but to the heavenly orbs and to the phenomena of nature, are not so easily found. There can be no doubt that the impression made by the grandeur of nature upon the mind of primitive man is the ultimate cause from which these myths spring, but, nevertheless, the form in which we find these traditions is largely influenced by borrowing. It is also due to its effects that in many cases the ideas regarding the heavenly orbs are entirely inconsistent. Thus the Newettee have the whole northern legend of the raven liberating the sun, but, at the same time, the sun is considered the father of the mink, and we find a tradition of the visit of the mink in heaven, where he carries the sun in his father's place. Other inconsistencies, as great as this one, are frequent. They are an additional proof that one or

the other of such tales which are also found among neighboring tribes,—and there sometimes in a more consistent form,—has been borrowed.

These considerations lead me to the following conclusion, upon which I desire to lay stress. The analysis of one definite mythology of North America shows that in it are embodied elements from all over the continent, the greater number belonging to neighboring districts, while many others belong to distant areas, or, in other words, that dissemination of tales has taken place all over the continent. In most cases, we can discover the channels through which the tale flowed, and we recognize that in each and every mythology of North America we must expect to find numerous foreign elements. And this leads us to the conclusion that similarities of culture on our continent are always more likely to be due to diffusion than to independent development. When we turn to the Old World, we know that there also diffusion has taken place through the whole area from western Europe to the islands of Japan, and from Indonesia to Siberia, and to northern and eastern Africa. In the light of the similarities of inventions and of myths, we must even extend this area along the North Pacific coast of America as far south as Columbia River. These are facts that cannot be disputed.

If it is true that dissemination of cultural elements has taken place in these vast areas, we must pause before accepting the sweeping assertion that sameness of ethnical phenomena is *always* due to the sameness of the working of the human mind, and I take clearly and expressly issue with the view of these modern anthropologists who go so far as to say that he who looks for acculturation as a cause of similarity of culture has not grasped the true spirit of anthropology.

In making this statement, I wish to make my position perfectly clear. I am, of course, well aware that there are many phenomena of social life seemingly based on the most peculiar and most intricate reasoning, which we have good cause to believe have developed independently over and over again. There are others, particularly such as are more closely connected with the emotional life of man, which are undoubtedly due to the organization of the human mind. Their domain is large and of

high importance. Furthermore, the similarity of culture which may or may not be due to acculturation gives rise to the same sort of ideas and sentiments which will originate independently in different minds, modified to a greater or less extent by the character of environment. Proof of this are the ideas and inventions which even in our highy specialized civilization are "in the air" at certain periods, and are pronounced independently by more than one individual, until they combine in a flow which carries on the thought of man in a certain direction. All this I know and grant.

But I do take the position that this enticing idea is apt to carry us too far. Formerly, anthropologists saw acculturation or even common descent wherever two similar phenomena were observed. The discovery that this conclusion is erroneous, that many similarities are due to the psychical laws underlying human development, has carried us beyond its legitimate aim, and we start now with the presumption that all similarities are due to these causes, and that their investigation is the legitimate field of anthropological research. I believe this position is just as erroneous as the former one. We must not accuse the investigator who suspects a connection between American and Asiatic cultures as deficient in his understanding of the true principles of anthropology. Nobody has proven that the psychical view holds good in all cases. To the contrary, we know many cases of diffusion of customs over enormous areas. The reaction against the uncritical use of similarities for the purpose of proving relationship and historical connections is overreaching its aim. Instead of demanding a critical examination of the causes of similarities, we say now *a priori,* they are due to psychical causes, and in this we err in method just as much as the old school did. If we want to make progress on the desired line, we must insist upon critical methods, based not on generalities but on each individual case. In many cases, the final decision will be in favor of independent origin; in others in favor of dissemination. But I insist that nobody has as yet proven where the limit between these two modes of origin lies, and not until this is done can a fruitful psychological analysis take place. We do not even know if the critical examination may not lead us to assume a persistence

of cultural elements which were diffused at the time when man first spread over the globe.

It will be necessary to define clearly what Bastian terms the elementary ideas, the existence of which we know to be universal, and the origin of which is not accessible to ethnological methods. The forms which these ideas take among primitive people of different parts of the world, "die Völker-Gedanken," are due partly to the geographical environment and partly to the peculiar character of the people, and to a large extent to their history. In order to understand the growth of the peculiar psychical life of the people, the historical growth of its customs must be investigated most closely, and the only method by which the history can be investigated is by means of a detailed comparison of the tribe with its neighbors. This is the method which I insist is necessary in order to make progress toward the better understanding of the development of mankind. This investigation will also lead us to inquire into the interesting psychological problems of acculturation, viz., what conditions govern the selection of foreign material embodied in the culture of the people, and the mutual transformation of the old culture and the newly acquired material.

To sum up, I maintain that the whole question is decided only in so far as we know that independent development as well as diffusion have made each culture what it is. It is still *sub judice* in how far these two causes contributed to its growth. The aspects from which we may look at the problem have been admirably set forth by Professor Otis T. Mason in his address on similarities of culture. In order to investigate the psychical laws of the human mind which we are seeing now indistinctly because our material is crude and unsifted, we must treat the culture of primitive people by strict historical methods. We must understand the process by which the individual culture grew before we can undertake to lay down the laws by which the culture of mankind grew. . . . .—F. Boas, *Journal of American Folk-Lore*, 9: 1–11.

The first three selections in Part II may be accepted as sound standpoint for the interpretation of savage mind, and they also contain standpoint for the interpretation of the succeeding parts of the volume.

The selections from Spencer contain a view of savage mind which has become popular and widespread, largely through his exposition of it, but which is very erroneous. The two selections should be read in the light of the papers by Boas and Dewey. It will then be seen that the cases presented by Spencer can be used as material for the confutation of his own views. It should also be observed that Spencer constantly assumes that the mind of the child is modified by the experiences and practices of its parents, whereas the weight of opinion at present inclines to the view that nothing of this kind happens. The characters of body and mind acquired by the parent after birth are probably not inherited by the child. We must look for the improvement of a race, (1) in congenital variations, resulting in an improvement of the stock (and this seems to be of relatively slight importance), and (2) in an improvement in *cultural* conditions, affording the mind more truth and a richer assortment of material to begin with and to work on.

The papers on Australian initiation ceremonies and food regulations would have been appropriately placed in Part VII, since they deal with control. But they are introduced at this point to show the ingenuity of the savage mind in working out a social control. The edu-

cational system of the savage was designed to secure the solidarity of the group, not to convey a body of exact knowledge. The formal instruction was mainly moral; the occupational practice was picked up informally. The food regulations of the Australians are a striking example of the thoroughness with which the moral instruction was imparted. These papers also suggest that when the control becomes very rigid, so rigid that all the acts of the individual are predetermined for him, the power of change becomes enfeebled and the society is in danger of becoming stationary.

The language, and the number, time, and space concepts and systems of the savage form very important materials for the interpretation of his mental life. The single paper of Howitt on Australian messengers and message-sticks which I have been able to introduce should be supplemented by reading indicated in the bibliography of this part.

The paper on the development of the occupations is used here because the occupations represent the modes in which the mind expresses itself, and specialization of occupation, more than anything else, is the mode of developing consciousness. Boas' paper on the myth touches the question of the parallel development of ideas in different geographical areas, as compared with the spread of ideas from one area to another.

I have taken advantage of the fact that this part of the volume deals with the mind to include in the following bibliography some important general psychological titles, and I have further included some titles on animal mind and behavior.

*1 ACHELIS, T. "Ueber die psychologische Bedeutung der Ethnologie," *Internationales Archiv f. Ethnog.*, 5:221–31.

2 ALLEN, J. "The Associative Processes of the Guinea Pig," *Jour. Comp. Neurol. and Psych.*, 14:293–359.

*3 ANDREE, R. *Ethnographische Parallelen und Vergleiche*, "Merkzeichen und Knotenschrift," 184–97; "Anfänge der Kartographie," 197–221; "Werthmesser," 221–50.

4 ANDREE, R. *Ethnographische Parallelen und Vergleiche.* Neue Folge, "Gemütsäusserungen und Geberden," 49–55.

5 ANDREE, R. "Die Personennamen in der Völkerkunde," *Zeits. f. Ethn.*, 8:253–63.

*6 ANDREE, R. "Ueber einige Gemüthsäusserungen und Geberden der Naturvölker," *Globus*, 43:14, 15.

*7 ANGELL, J. R., AND MOORE, A. W. "Reaction-Time: A Study in Attention and Habit," *Univ. of Chicago Contr. to Philos.*, 1:1–14.

8 ASHMEAD, A. "Some Psychological Studies of Man's Moral Evolution," *Alienist and Neurologist*, 38:475–78.

9 ASTON, W. G. "Japanese Onomatopes and the Origin of Language," *Jour. Anth. Inst.*, 23:332–62.

10 BAAS, J. H. *Die geschichtliche Entwickelung des ärtzlichen Standes und der medizinischen Wissenschaften.* Berlin, 1896.

11 BABELON, E. *Les origines de la monnaie.* Paris, 1897.

*12 BALDWIN, J. M. *Social and Ethical Interpretations in Mental Development.* New York, 1907.

[Not well organized and not always clear, but of first rate importance.]

*13 BÄLZ, E. "Zur Psychologie der Japaner," *Globus*, 84:312–19.

[Admirable paper; destroys views of ten Kate.]

*14 BARTELS, M. *Die Medicin der Naturvölker.* Leipzig, 1893.

15 BARTH, P. "Die Geschichte der Erziehung in soziologischer Beleuchtung," *Vierteljahrsschrift für wissenschaftliche Philosophie und Sociologie*, 27:57–80; 209–29.

16 BASTIAN, A. *Beiträge zur vergleichenden Psychologie: die Seele und ihre Erscheinungswesen in der Ethnographie.* Berlin, 1868.

17 BASTIAN, A. *Ethnische Elementargedanken in der Lehre vom Menschen.* Berlin, 1895. 2 v.

18 Bastian, A. *Wie das Volk denkt, ein Beitrag zur Beantwortung socialer Fragen auf Grundlage ethnischer Elementargedanken in der Lehre vom Menschen.* Berlin, 1892.

19 Bleek, W. H. I. "On the Position of the Australian Languages," *Jour. Anth. Inst.*, 1:89–102.

20 Bloxam, G. W. "Exhibition of West African Symbolic Messages," *Jour. Anth. Inst.*, 16:295–99.

*21 Boas, Franz. "Human Faculty as Determined by Race," *Amer. Assoc. for the Adv. of Sci., Proc.*, 43:301–27.

22 Boas, F. "Classification of the Languages of the North Pacific Coast," *Internat. Cong. of Anth., Mem.*, 339–46.

*23 Boas, F. "Property Marks of Alaskan Eskimo," *Amer. Anth.*, N. S., 1:601–13.

*24 Boas, F. "Some Traits of Primitive Culture," *Jour. Amer. Folk-Lore*, 17:233–54.

25 Bordier, A. "Naissance et évolution des idées et des pratiques médicales," *Rev. mensuelle de l'école d'anth.*, 3:41–59.

26 Brinton, D. G. "Lefthandedness in North American Aboriginal Art," *Amer. Anth.*, 9:175–81.

27 Brinton, D. G. "The Origin of Sacred Numbers," *Amer. Anth.*, 7:168–73.

28 Brinton, D. G. *Studies in South American Native Languages.* Philadelphia, 1892.

*29 Bruner, F. G. *The Hearing of Primitive Peoples.* New York, 1908. (Also, *Columbia Univ. Contributions to Philos. and Psych.*, 17:No. 3.)

30 Bryce, J. *The Relations of the Advanced and the Backward Races of Mankind.* Oxford, 1902.

31 Bülow, W. von. "Samoanische Sagen," *Globus*, 68:39–41; 157–59; 365–68; 69:322–27.

32 Bushnell, D. I. "The Origin of Wampum," *Jour. Anth. Inst.*, 36: 172–77.

33 Buttel-Reepen, H. von. "Soziologisches und biologisches vom Ameisen- und Bienenstaat," *Archiv f. Rassen- und Gesellschafts-Biologie*, 2:20–35.

34 Carlile, Wm. W. "The Origin of Money from Ornament," *Nineteenth Century*, 58:290–97.

*35 Carr, Harvey, and Watson, J. B. "Orientation in the White Rat," *Jour. Comp. Neurol. and Psych.*, 18:27–44.

35*a* CHAMBERLAIN, A. F. *The Child and Childhood in Folk-Thought.* New York, 1896.

35*b* CHAMBERLAIN, B. H. "Translation of the Dou-Thi-Ken" [Teachings for the Young], *Asiat. Soc. of Japan, Trans.*, 9:223–49.

36 CODRINGTON, R. H. *The Melanesian Languages.* Oxford, 1885.

*37 COOLEY, C. H. "Genius, Fame and the Comparison of Races," *Annals of the Amer. Acad.*, 9:317–58.

38 CONANT, L. L. *The Number Concept: Its Origin and Development.* New York and London, 1896.

39 CONANT, L. L. "The Origin of Numeral Words," *Amer. Assoc. for the Adv. of Sci., Proc.*, 43:349–50.

40 CONANT, L. L. "Primitive Number Systems," *Smithsonian Inst., Ann. Rep.* for 1892:583–94.

*41 CRAIG, W. "The Voices of Pigeons Regarded as a Means of Social Control," *Am. Jour. Sociol.*, 14:86–100.

42 CUNNINGHAM, D. J. "Right-handedness and Left-handedness," *Jour. Anth. Inst.*, 32:273–96.

*43 CUREAU, A. "Essai sur la psychologie des races Nègres de l'Afrique tropicale," *Rev. gén. des sci.*, 15:638–52; 679–95.

44 CURR, E. M. *The Australian Race,* "Remarks on the Aboriginal Languages of Australia," 1:1–35.

*45 CUSHING, F. H. "Manual Concepts: A Study of the Influence of Hand-Usage on Culture-Growth," *Amer. Anth.*, 5:289–318.

46 CUSHING, F. H. "Zuñi Weather Proverbs." In DUNWOODY, H. H. C. *Weather Proverbs.* Washington, 1883:124–27. (*U. S. A. War Dept., Signal Service Notes,* No. 9.)

47 DÄHNHARDT, O. "Beiträge zur vergleichenden Sagenforschung," *Zeits. des Vereins f. Volkskunde,* 16:369–96.

48 DANKS, B. "Shell Money of North Britain," *Jour. Anth. Inst.*, 17:305–17.

49 DAVIS, E. J. *Osmanli Proverbs.* London, 1898.

50 DEL MAR, A. *A History of Money in Ancient Countries from the Earliest Times to the Present.* London, 1885.

51 DEL MAR, A. *A History of the Precious Metals, from the Earliest Times to the Present Day.* New York, 1902.

52 DEL MAR, A. *Monograph on the History of Money in China.* San Francisco, 1881.

52*a* DENING, W. "Mental Characteristics of the Japanese," *Asiat. Soc. of Japan, Trans.*, 19:17–36.

*53 DENNETT, R. E. *At the Back of the Black Man's Mind*, "Measures, Signs, and Symbols," 59–78; "Bavili Psychology," 79–84; "Bavili Philosophy," 100–109; "The Philosophy at the Back of the Black Man's Mind in Table Form," 232–42.

*54 DENNETT, R. E. "Notes on the Philosophy of the Bavili," *Jour. Anth. Inst.*, 35:48–55.

*55 DEWEY, J. "The Control of Ideas by Facts," *Jour. Philos., Psych. and Sci. Meth.*, 4:197–203; 253–59; 309–19.

*56 DEWEY, J. "The Reflex Arc Concept," *Psych. Rev.* 3:357–70.
[This and the following title are very important for standpoint.]

*57 DEWEY, J., AND TUFTS, J. H. *Ethics.* New York, 1908.

58 DIXON, R. B., AND KROEBER, A. L. "The Native Languages of California," *Amer. Anth.*, N. S., 5:1–26.

59 DIXON, R. B., AND KROEBER, A. L. "Numeral Systems of the Languages of California," *Amer. Anth.*, N. S., 9:663–90.

*60 DONALDSON, H. H. *The Growth of the Brain: A Study of the Nervous System with Reference to Education.* New York, 1895.

*61 DOPP, K. E. *The Place of Industries in Elementary Education.* Chicago, 1902.

62 DORSEY, G. A. "Caddo Customs of Childhood," *Jour. Amer. Folk-Lore*, 18:226–28.

63 DORSEY, J. O. "Indian Personal Names," *Amer. Anth.*, 3:263–68.

64 EASTMAN, C. A. *Indian Boyhood.* New York, 1902.

65 EDKINS, J. *Chinese Currency.* Shanghai, 1901.

*66 EHRENREICH, P. "Wilhelm Wundt's Völkerpsychologie," *Globus*, 79:21–23.

67 ELKUS, S. A. *The Concept of Control.* Columbia Univ. Dissertation, 1907.

*68 ELLWOOD, C. A. "The Theory of Imitation in Social Psychology," *Amer. Jour. Sociol.*, 6:721–41.

69 FÁBRYA, H. P. DE. "Numeral Systems of the Costa Rican Indians," *Amer. Anth.*, N. S., 6:447–58.

70 FARRAR, F. W. "Aptitudes of Races," *Trans. of the Ethn. Soc.*, N. S., 5:115–26.

71 FIELDE, A. M. "A Study of an Ant," *Phila. Acad. Nat. Sci., Proc.*, 53:425–49; 521–44; 55:491–95.

72 FIELDE, A. M. "Artificial Mixed Nests of Ants," *Biol. Bul.*, 5:320–25.

73 Fielde, A. M. "A Cause of Feud between Ants of the Same Species Living in Different Communities," *Biol. Bul.*, 5:326–29.

74 Fison, L. "On Fijian Riddles," *Jour. Anth. Inst.*, 11:406–10.

75 Flügel, O. "Das Ich im Leben der Völker," *Zeits. f. Völkerpsychologie und Sprachwissenschaft*, 11:43–80; 141–60.

76 Fouillée, A. *Esquisse psychologique des peuples Européens.* Paris, 1903.

77 Fouillée, A. "Le materialisme historique et la force des idées," *Institut internat. de sociologie, Annales*, 8:275–82.

78 Fouillée, A. *La psychologie des idées forces.* Paris, 1893. 2 v.

79 Fouillée, A. "La psychologie des peuples et l'anthropologie," *Revue des deux mondes*, 128:365–96.

80 Fouillée, A. *Psychologie des peuples Français.* Paris, 1898.

81 Fouillée, A. *Tempérament et caractère selon les individus, les sexes et les races.* Paris, 1907.

82 Friederici, G. "Der Tränengruss der Indianer," *Globus*, 89:30–34.

83 Friedmann, M. *Ueber Wahnideen im Völkerleben.* Wiesbaden, 1901.

84 Gatschet, A. S. "'Real,' 'True,' or 'Genuine' in Indian Languages," *Amer. Anth.*, N. S., 1:155–61.

85 Geiger, L. *Ursprung und Entwickelung der menschlichen Sprache und Vernunft.* Stuttgart, 1899.

86 Giesswein, A. *Die Hauptprobleme der Sprachwissenschaft in ihren Beziehungen zur Theologie, Philosophie und Anthropologie.* Freiburg, 1892.

87 Gollmer, C. A. "On African Symbolic Messages," *Jour. Anth. Inst.*, 14:169–82.

88 Gordon, G. B. "On the Use of Zero and Twenty in the Maya Time System," *Amer. Anth.*, N. S., 4:237–75.

89 Gray, J. *Ancient Proverbs and Maxims from Burma.* London, 1886.

90 Grinnell, G. B. "Some Cheyenne Plant Medicines," *Amer. Anth.*, N. S., 7:37–143.

92 Harkness, W. "The Progress of Science as Exemplified in the Art of Weighing and Measuring," *Smithsonian Inst., Ann. Rep.* for 1888:597–633.

93 Hale, H. "Four Huron Wampum Records: A Study of Aboriginal American History and Mnemonic Symbols," *Jour. Anth. Inst.*, 26: 221–47.

94 HALE, H. "Language as a Test of Mental Capacity," *Jour. Anth. Inst.*, 21:413–55.

95 HEWITT, E. L. "Ethnic Factors in Education," *Amer. Anth.*, N. S., 7:1–16.

96 HIRSCH, W. *Genius and Degeneration.* New York, 1896. (Translation.)

*97 HOBHOUSE, L. T. *Mind in Evolution.* London and New York, 1901.

*97a HOFFMAN, W. J. *The Beginnings of Writing.* New York, 1895.

98 HOLDEN, E. S. "Studies in Central American Picture Writing," *Bur. Amer. Ethn., Ann. Rep.*, 1:206–45.

*99 HOLLIS, A. C. *The Masai,* "Proverbs-Enigmas," 238–59.

*100 HOLLIS, A. C. *The Nandi,* "Proverbs-Enigmas," 124–51.

101 HOUGH, W. "Time-Keeping by Light and Fire," *Amer. Anth.*, 6: 207–10.

102 HOWITT, A. W. "Australian Message-Sticks and Messengers," *Jour. Anth. Inst.*, 18:316–33.

*103 HOWITT, A. W. *The Native Tribes of South-East Australia,* "Messengers and Message-Sticks—Barter and Trade Centres—Gesture Language," 678–735.

*104 JENNINGS, H. S. *Behavior of the Lower Organisms.* New York, 1906.

105 JENSEN, H. *A Classified Collection of Tamil Proverbs.* London, 1897.

106 JOHNSTON, S. H. *George Grenfell and the Congo,* "The Languages of the Congo Basin and the Cameroons," 2:826–91.

*107 JUDD, C. H. *Psychology,* "Language," 248–73.

108 JUNG, K. A. "Aus dem Seelenleben der Australier," *Mitth. des Vereins für Erdkunde zu Leipzig,* 1877.

109 KATE, H. TEN. "Zur Psychologie der Japaner," *Globus,* 82:53–56.

110 KATE, H. TEN. "Noch einmal 'zur Psychologie der Japaner,'" *Globus,* 84:15, 16; 85:226, 227.

*111 KEANE, A. H. *Ethnology,* "Mental Evolution in Man," 40–49.

112 KEANE, A. H. "On the Relations of the Indo-Chinese and Inter-Oceanic Races and Languages," *Jour. Anth. Inst.*, 9:254–89.

113 KÉRAVAL, P. *Le langage écrit: ses origines, son développement et son mécanisme intellectuel.* Paris, 1897.

114 KERN, R. A. "A Malay Cipher Alphabet," *Jour. Anth. Inst.*, 38 207–11.

115 KERSCHENSTEINER, G. *Die Entwickelung der Begabung.* München, 1905.

*116 KIDD, D. *Savage Childhood.* London, 1906.

*117 KING, I. *Psychology of Child Development.* Chicago, 1903.

118 KING, R. "On the Intellectual Character of the Esquimaux," *Jour. Ethn. Soc.*, 1:127–53.

*119 KINNAMAN, A. J. "Mental Life of Two *Macacus rhesus* Monkeys in Captivity," *Am. Jour. Psych.*, 13:98–148; 173–218.

119*a* KIRBY, R. J. "Translation of Dazai Jun's Essay on Gakusei" [Educational Control], *Asiat. Soc. of Japan, Trans.*, 34, Pt. 4: 133–44.

120 KRAPOTKIN, P. "Mutual Aid among Animals," *Nineteenth Century*, 28: 337–54; 609–719.

121 KREMER, A. VON. *Geschichte der herrschenden Ideen des Islams; der Gottesbegriff, die Prophetie und Staatsidee.* Leipzig, 1868.

122 KULISCHER, M. "Die Behandlung der Kinder und der Jugend auf den primitiven Kulturstufen," *Zeits. f. Ethn.*, 15: 191–203.

123 LABORDE, J. V. "Introduction à l'étude de la fonction du langage," *Rev. mensuelle de l'école d'anth.*, 1:353–69. Cf. also 3:1–16.

*124 LAUFER, B. "A Theory of the Origin of Chinese Writing," *Am. Anth.*, N. S., 9:487–92.

125 LAZARUS, M. "Ueber die Ideen in der Geschichte," *Zeits. für Volkerpsych. und Sprachwiss.*, 3:385–486.

126 LEBON, G. *The Psychology of Peoples: Its Influence on Their Evolution.* London, 1898. (Translation.)

127 LEBON, G. "Comment les peuples transforment leur civilisation et leur arts," Rev. *scientifique*, 50:417–428.

128 LEFÈVRE, A. *Race and Language.* New York, 1894.

129 LETOURNEAU, C. *L'évolution de l'éducation dans les diverses races humaines.* Paris, 1898.

130 LETOURNEAU, C. "La monnaie chez les races de couleur," *Bul. de la soc. d'anth. de Paris*, 4 sér., 10:679–92.

131 LIÉTARD, G. A. *Lettres historiques sur la médecine chez les Indous.* Paris, 1862.

132 LIÉTARD, G. A. *Résumé de l'histoire de la médecine chez les orientaux et en Europe jusqu'au XIII. siècle.* Paris, 1897.

133 LIÉTARD, G. A. *Sur l'histoire de la médecine chez les Indous.* Strasbourg, 1858.

134 LOCKHART, J. H. S. *The Currency of the Farther East from the Earliest Times up to the Present Day.* Hongkong, 1895. 2 v.

*135 LOEB, J. *Comparative Physiology of the Brain and Comparative Psychology.* New York, 1900.

136 LUKAS, F. *Psychologie der niedersten Tiere.* Wien, 1905.

137 MACDONALD, D. B. "The Moral Education of the Young among Muslims," *Internat. Jour. of Ethics,* 15:286–304.

138 MACDONALD, R. M. "Der Arzneistoff Pituri oder Pidgery der Australier," *Globus,* 87:211.

139 MACDONALD, R. M. "Pidgery or Pituri," *Scottish Geog. Mag.,* 20: 606.

*140 MACDOUGALL, R. "The Significance of the Human Hand in the Evolution of Mind," *Amer. Jour. Psych.,* 16:232–42.

*141 MCDOUGALL, W. *An Introduction to Social Psychology.* London, 1908. [First rate.]

*142 MCDOUGALL, W., AND MYERS, C. S. "Hearing—Smell—Taste—Cutaneous Sensations—Muscular Sense—Blood Pressure—Reaction Times," *Cambridge Anth. Exped. to Torres Straits, Rep.,* 2:141–223.

*143 MCGEE, W. J. "The Beginning of Mathematics," *Amer. Anth.,* N. S., 1:646–74.

*144 MCGEE, W. J. "Comparative Chronology," *Amer. Anth.,* 5:327–44.

*145 MCGEE, W. J. "Piratical Acculturation," *Amer. Anth.,* 11:243–49.

*146 MCGEE, W. J. "Primitive Numbers," *Bur. Amer. Ethn., Ann. Rep.,* 19:821–51.

147 MACGOWAN, D. "Modes of Keeping Time Known among the Chinese," *Smithsonian Inst., Ann. Rep.* for 1891:670–12.

148 MACKENZIE, A. "Specimens of Native Australian Languages," *Jour. Anth. Inst.,* 3:247–64.

149 MAGNUS, H. "Die Volksmedizin, ihre geschichtliche Entwickelung und ihre Beziehungen zur Kultur," *Abhandlungen zur Geschichte der Medizin,* 15 (1905): 1–112.

*150 MALLERY, G. "Pictographs of the North American Indians," *Bur. Amer. Ethn., Ann. Rep.,* 4:3–256.

*151 MALLERY, G. "Picture-Writing of the American Indians," *Bur. Amer. Ethn., Ann. Rep.,* 10: 3–807.

*152 MALLERY, G. "Sign-Language of North American Indians," *Bur. Amer. Ethn., Ann. Rep.*, 1:269–552.

153 MANWARING, A. *Marathi Proverbs.* Oxford, 1899.

154 MANN, A. "Notes on the Numeral System of the Yoruba Nation," *Jour. Anth. Inst.*, 16:59–64.

155 MANOUVRIER, L. "Le tempérament," *Rev. mensuelle de l'école d'anth.*, 6:425–49.

156 MARCH, O. S. VON DER. *Völkerideale.* Leipzig, 1901.

*157 MASON, O. T. "Similarities in Culture," *Amer. Anth.*, 8:101–17.

*158 MASON, O. T. "Mind and Matter in Culture," *Amer. Anth.*, N. S., 10:187–96.

159 MATHEWS, R. H. "Message-sticks Used by the Aborigines of Australia," *Amer. Anth.*, 10:288–98.

160 MEAD, G. H. "The Imagination in Wundt's Treatment of Myth and Religion," *Psych. Bul.*, 3:393–99.

161 MENGES, J. "Die Zeichensprache des Handels in Arabien und Ost-Afrika," *Globus*, 48:9, 10.

162 MEYER, J. B. "Genie und Talent," *Zeits. f. Völkerpsychologie und Sprachwissenschaft*, 11:269–302.

163 MILLS, T. W. *The Nature and Development of Animal Intelligence.* New York, 1898.

164 MONTEIL, C. "Considérations générales sur le nombre et la numération chez les Mandés," *L'Anthropologie*, 16:485–502.

*165 MORGAN, C. L. *Animal Behavior.* London, 1900.

*170 MORGAN, C. L. *Introduction to Comparative Psychology.* London, 1894.

171 MORGAN, L. H. *Ancient Society*, "Ratio of Human Progress," 29–45.

172 MURDOCH, J. "Notes on Counting and Measuring among the Eskimo of Point Barrow," *Amer. Anth.*, 3:37–43.

173 NADAILLAC, MARQUIS DE. "Unité de l'espèce humaine prouvée par la similarité des conceptions et des créations de l'homme," *Rev. des questions scientifiques*, 42:415–48.

*174 PAYNE, E. J. *History of the New World*, "Language and Personality," 2:81–305; "Number and Time Concepts," 2:306–77.

*175 PEARSON, K. "On the Inheritance of the Mental and Moral Characters in Man, and its Comparison with the Inheritance of the Physical Characters," *Jour. Anth. Inst.*, 33:179–237.

*176 Peckham, G. W., and E. G. "Some Observations on the Mental Powers of Spiders," *Jour. Morph.*, 1:383–419.

*177 Peckham, G. W., and E. G. *Wasps, Social and Solitary.* Boston, 1905.

178 Pfeil, Graf von. "Duk Duk and Other Customs as Forms of Expression of the Melanesian Intellectual Life," *Jour. Anth. Inst.*, 27: 181–91.

*179 Ploss, H. H. *Das Kind in Brauch und Sitte der Völker.* Leipzig, 1884. 2 v. in 1.

180 Ploss, H. H. *Das kleine Kind vom Tragbett bis zum ersten Schritt . . . . bei den verschiedenen Völkern der Erde.* Berlin, 1881.

*181 Porter, J. P. "A Preliminary Study of the Psychology of the English Sparrow," *Amer. Jour. Psych.*, 15:313–46.

*182 Porter, J. P. "Further Study of the English Sparrow and Other Birds," *Amer. Jour. Psych.*, 17:248–71.

183 Powell, J. W. "Indian Linguistic Families of America, North of Mexico," *Bur. Amer. Ethn., Ann. Rep.*, 7:1–142.

*184 Powell, J. W. "On Activital Similarities," *Bur. Amer. Ethn., Ann. Rep.*, 3:lxv–lxxiv.

*185 Powell, J. W., "Philology, or the Science of Activities Designed for Expression," *Bur. Amer. Ethn., Ann. Rep.*, 20:cxxxix–clxx.

*186 Powell, J. W. "Sophiology, or the Science of Activities Designed to Give Instruction," *Bur. Amer. Ethn., Ann. Rep.*, 20:clxxi–cxcvii.

187 Ranke, C. E. "Einige Beobachtungen über die Seeschärfe bei südamerikanischen Indianern," *Deutsche Gesellsch. f. Anth., Ethn. und Urgeschichte, Correspondenzblatt*, 28:113–19.

*188 Ratzel, F. *History of Mankind*, "Language," 1:30–38; "Science and Art," 1:65–76; "Intellectual Life of the Polynesians and Micronesians," 1:185–95; "Intellectual Life of the Malays," 1:393–405.

*189 Ray, S. H. "Linguistics," *Cambridge Anth. Exped. to Torres Straits, Rep.*, 3:1–527.

*190 Reibmayr, A. *Die Entwickelungsgeschichte des Talentes und Genies.* Munich, 1908. 2 v.

*191 Ridgeway, W. *The Origin of Metallic Currency and Weight Standards.* Cambridge, 1892.

192 Ridley, W. "Australian Languages and Traditions," *Jour. Anth. Inst.*, 2:257–91.

*193 RIVERS, W. H. R. "Vision," *Cambridge Anth. Exped. to Torres Straits, Rep.*, 2:1–140.

*194 RIVERS, W. H. R. *The Todas*, "Language," 602–18; "Personal Names," 619–27.

*195 RIVERS, W. H. R. "Personal Names," *Cambridge Anth. Exped. to Torres Straits, Rep.*, 5:280–83; 6:102–4.

196 ROBINSON, J. *Psychologie der Naturvölker.* Leipzig, 1896.

197 ROCHET, L. *Maximes et proverbs mongoles et manchoux.* Paris, 1875.

198 ROEDER, A. *Symbol-Psychology, a New Interpretation of Race-Traditions.* New York, 1903.

199 SCHEERER, O. "The Nabaloi Dialect," *Ethn. Survey Pub.*, 2:85–178. Manila, 1905.

200 SCHMID, K. A. *Geschichte der Erziehung.* Stuttgart, 1884–1902. 5 v.

[Vol. I is in part on education among the lower races.]

201 SCHNEIDER, O. *Muschelgeld-Studien.* Dresden, 1905.

*202 SCHRAEDER, O. *Sprachvergleichung und Urgeschichte.* (Translated as *Prehistoric Antiquities of the Aryan Peoples.*) London, 1890.

203 SCHULTZE, E. *Psychologie der Naturvölker.* Leipzig, 1900.

204 SCHURTZ, H. *Grundriss einer Entstehungsgeschichte des Geldes.* (*Beiträge zur Volks- und Völkerkunde*, 5.) Weimar, 1898.

205 SCHURTZ, H. "Die Milderung des menschlichen Characters vom Standpunkte der Ethnologie," *Globus*, 59:299–303.

206 SEIDLITZ, N. VON. "Sprichwörter aus dem Turkestan," *Globus*, 62:186–88.

207 SEIDLITZ, N. VON. "Sprichwörter der Eingeborenen des Turkestan," *Globus*, 56:333–35; 378–80.

208 SELIGMAN, C. G. "The Medicine, Surgery, and Midwifery of the Sinaugolo," *Jour. Anth. Inst.*, 32:297–304.

*209 SIGHELE, S. *Psychologie des sectes.* Paris, 1897.

*210 SKEAT AND BLAGDEN. *Pagan Races of the Malay Peninsula*, "Taboo and Other Special Forms of Speech," 2:414–31.

211 SMITH, A. H. *Proverbs and Common Sayings of the Chinese.* Shanghai, 1889.

212 SMITH, MRS. E. A. "The Customs and Language of the Iroquois," *Jour. Anth. Inst.*, 14:244–53.

213 Souffret, F. *De la disparité physique et mentale des races humaines et de ses principes.* Paris, 1892.

*214 Spencer, F. C. "Education of the Pueblo Child: A Study in Arrested Development," *Columbia Univ. Contr. to Philos., Psych., and Educ.*, 7:1–97.

*215 Spencer, B., and Gillen, F. J. *The Northern Tribes of Central Australia,* "Names and Naming," 580–87.

*216 Spencer, H. *The Principles of Sociology,* "The Primitive Man—Intellectual," 1:75–93; "Primitive Ideas," 1:94–124; "Professional Institutions," 3:179–326.

217 Spencer, H. *Descriptive Sociology,* "Language and Knowledge," 1:40–48; 2:48–53; 3:42–47; 4:34–36; 5:41–45; 6:38–43; 7:87–95; 8:126–33.

218 Spencer, H. "The Comparative Psychology of Man," *Jour. Anth. Inst.*, 5:301–16.

219 Stearns, R. E. C. "Ethno-Conchology: A Study of Primitive Money," *U. S. Nat. Mus., Ann. Rep.* for 1887:297–334.

*220 Steinen, K. von den. "Erfahrungen zur Entwickelungsgeschichte der Völkergedanken," *Globus,* 56:11–15.

221 Steinen, K. von den. "Proben einer früheren polynesischen Geheimsprache," *Globus,* 87:119–21.

222 Steinthal, H. "Zur Charakteristik der semitischen Völker," *Zeits. f. Völkerpsychologie und Sprachwissenschaft,* 1:328–45.

223 Stephan, E. "Beiträge zur Psychologie der Bewohner von Neupommern," *Globus,* 88:205–10; 216–21.

*224 Steinmetz, S. R. "Suicide among Primitive Peoples," *Amer. Anth.*, 7:53–60.

*225 Steinmetz, S. R. "Das Verhältnis zwischen Eltern und Kindern bei den Naturvölkern," *Zeits f. Socialwissenschaft,* 1:607–31.

226 Stenz, G. M. "Arzt und Apotheker in China," *Globus,* 81:383–86.

*227 Stevenson, Mrs. T. E. "Religious Life of the Zuñi Child," *Bur. Amer. Ethn., Ann. Rep.,* 5:533–55.

*228 Stoll, O. *Suggestion und Hypnotismus in der Völkerpsychologie.* Leipzig, 1904.

*229 Tarde, G. *The Laws of Imitation.* (Tr. by E. C. Parsons.) New York, 1903.

230 Tarde, G. *Logique sociale.* Paris, 1898.

231 Taylor, I. *The History of the Alphabet.* London, 1899. 2 v.

*232 TEMPLE, R. C. "Beginnings of Currency," *Jour. Anth. Inst.*, 29:99–122.

233 THOMAS, C. "Day Symbols of the Maya Year," *Bur. Amer. Ethn., Ann. Rep.*, 16:205–65.

234 THOMAS, C. "Mayan Calendar Systems," *Bur. Amer. Ethn., Ann. Rep.*, 19:693–819; 22:197–305.

235 THOMAS, C. "Mayan Time Systems and Time Symbols," *Amer. Anth.*, N. S., 2:53–62.

236 THOMAS, C. "Numeral Systems of Mexico and Central America," *Bur. Amer. Ethn., Ann. Rep.*, 19:853–955.

237 THOMAS, N. W. "Note on Some American Parallels to European Agricultural Customs," *Jour. Anth. Inst.*, 31:155, 156.

238 THOMAS, W. I. "The Gaming Instinct," *Amer. Jour. Sociol.*, 6:750–63.

239 THOMAS, W. I. "Der Mangel an Generalisationsvermögen bei den Negern," *Zeits. f. Socialwissenschaft*, 7:215–21.

240 THOMAS, W. I. "The Psychology of Race-Prejudice," *Am. Jour. Sociol.*, 9:593–611.

*241 THORNDIKE, E. L. "Animal Intelligence," *Columbia Univ. Contr. to Philos., Psychol., and Educ.*, 4:No. 3.

*242 THORNDIKE, E. L. "The Mental Life of the Monkeys," *Columbia Univ. Contr. to Philos., Psychol., and Educ.*, 9:No. 1; *Psych. Rev. Mon. Sup.*, 3:No. 5.

243 TOPINARD, P. *Eléments d'anthropologie générale.* Paris, 1885.

[Of some value for brain weight of different races, etc. A smaller volume on the same subject is translated, with the title *Anthropology.* London, 1878.]

*244 TURNER, C. H. "A Preliminary Note on Ant Behavior," *Biol. Bul.*, 12:354.

*245 TYLOR, E. B. *Early History of Mankind,* "Gesture-Language," 14–81; "Picture-Writing and Word-Writing," 82–105; "Images and Names," 106–49; "Growth and Decline of Culture," 150–91.

246 TYLOR, E. B. "The Hale Series of Huron Wampum Belts," *Jour. Anth. Inst.*, 26:248–54.

247 TYLOR, E. B. "The Origin of Numerals," *Jour. Anth. Inst.*, 6:125–36.

*248 TYLOR, E. B. *Primitive Culture,* "Emotional and Imitative Language," 1:160–239; "The Art of Counting," 1:240–72.

249 VACCA, G. "Sulla matematica degli antichi cinesi," *Bollettino di bibliografia e storia delle scienze matematiche*, 8:97–102.

*250 VIERKANDT, A. "Die Kulturtypen der Menschheit," *Archiv f. Anth.*, 25:61–75.

*251 VIERKANDT, A. *Naturvölker und Kulturvölker.* Leipzig, 1896.

*252 VINCENT, G. E. *The Social Mind and Education.* New York, 1897.

253 VISSERING, W. *On Chinese Currency.* Leiden, 1877.

*253a WAITZ, T. *Introduction to Anthropology* (Collingwood's trans. of Vol. I of *Anthropologie der Naturvölker*), "Mental Characteristics of Race," 259–389.

254 WAKE, C. S. "The Mental Characters of Primitive Man, as Exemplified by the Australian Aborigines," *Jour. Anth. Inst.*, 1:74–84.

*255 WARD, L. F. *Psychic Factors of Civilization.* Boston, 1893.

*256 WASHBURN, M. F. *The Animal Mind.* New York, 1908.

[The best general statement of our present knowledge of the animal mind. Provided with a full bibliography.]

*257 WATSON, J. B. "Kinaesthetic and Organic Sensations: Their Rôle in the Reactions of the White Rat," *Psych. Rev., Mon. Sup.*, 8:1–100.

*258 WATSON, J. B. "Imitation in Monkeys," *Psych. Bul.*, 5:169–78.

*259 WATSON, J. B. The Behavior of Noddy and Sooty Terns," *Carnegie Inst. Pub.*, 103:187–225.

*260 WATSON, J. B. "Animal Education," *Univ. of Chicago Contr. to Philos.*, 4:No. 2.

[All of Watson's papers are excellent.]

261 WEALE, J. M. "On the Probable Derivation of Some Characteristic Sounds in Certain Languages from Cries or Noises Made by Animals," *Brit. Assoc. for the Adv. of Sci., Rep.*, 1892:907–9.

262 WICKERSHAM, J. "The Almanac of China and Central America," *Amer. Antiquarian*, 19:61–68.

263 WOLF, J. "Das Verhältnis von Eltern und Kindern bei dem Landvolk in Deutschland," *Zeits. f. Socialwissenschaft*, 1:715–22.

*264 WUNDT, W. *Völkerpsychologie.*

[Vol. I (1904) is on language and is of great importance.]

265 WUNDT, W. *Lectures on Human and Animal Psychology.* (Tr. by CREIGHTON AND TITCHENER.) London, 1896.

[Hall's *Adolescence* is omitted by no oversight.]

PART III
INVENTION AND TECHNOLOGY

INVENTION AND TECHNOLOGY

TOOLS AND MECHANICAL DEVICES

Among inventions, the class of objects that are not an end in themselves, but which are used as means to ends, occupy a very prominent place. They are covered by such terms as "tools," "implements," "machines."

Many of these are the apparatus of special crafts, and should be considered among the inventions belonging to those crafts. But a great many of them have come down from remote antiquity, and belong to workmen of every trade.

The tool chest of the Andamanese, according to Man, would contain a stone anvil, stone hammers, chips, and cooking stones; one or more *Cyrena* shells for preparing arrow shafts, for sharpening knives of cane and bamboo; and boar's tusks, for carving spoons, for knives in cutting thatch or meat, for scrapers in separating bast and bark in cord-making, for carving, and even for planes.

You would also find Arca shells for pot-making, *Pinna* shells for receptacles, and food plates and *Nautilus* shells for drinking-cups. The bamboo spear shafts, water holders, food receptacles, knives, netting-needles, tongs, &c., would call attention to the usefulness of that plant. Paint brushes from the drupe of the *Pandanus Andamanensium* should not be overlooked.

Under the head of general appliances for industrial processes may be included *tools, mechanical powers, metric apparatus, natural forces,* and *machinery*. M. Adrien de Mortillet has made a classification of simple tools which is adopted here, with additions and modifications.

I. For Cutting. Edge Tools

Working—

1. By Pressure. { Knives. / Double-edge tools, shears. / Planes.

2. By Shock. { Axes. Adzes. Chisels, gouges.

3. By Friction. Saws.

II. For Abrasion and Smoothing

Working—

1. By Pressure and Friction. { Scrapers, gravers, rasps, files, sand-papers, polishers, smoothers, burnishers, whetstones, grindstones.

2. By Shock. Bush-hammers.

In wood-working fire is an efficient element in abrasion.

III. For Fracturing, Crushing, Pounding

Working—

1. By Pressure. Chipping, and flaking implements.

2. By Shock. Hammers, pestles.

3. By Friction. Grinding apparatus, mills.

IV. For Perforating

Working—

1. By Pressure and Friction. { Needles, prickers, awls, drills of all kinds.

2. By Shock. Punches, picks.

V. For Grasping and Joining

1. Tongs, pincers, vices, clamps, wedges.

2. Nails, lashings, glues.

Before entering more minutely upon the study of tools, a few words should be said concerning the composition of tools, their working parts and haftings. It is true that millions of ancient objects, in stone especially, lying in museums and cabinets have now no handles. But it is fair to assume that the great majority of them were once so furnished. Indeed, in their manufacture the artificer spent as much time and pains in getting them ready to be hafted as he did in finishing the working portions. The best guide in furnishing anew these objects with hand-attachments is the study of modern savagery.

These are to be studied both in their adaptation to the hand

and in the method of their being fixed to the working part. The former, for convenience, may be called the grip, or handle; the latter, the attachment. The grip of an implement may be made to fit one hand or two, and to be held close to the object wrought upon, or at some distance. It is really this part that at last becomes a machine.

Many savages still use only the rudest kind of grip, merely smoothing the rough surface of the material or wrapping something about it, so as not to hurt the hand, but this is not true of all tribes.

The Eskimo men and women carve, from walrus ivory, musk-ox horn, and wood, the daintiest handles for their scrapers and other implements. They fit so exactly that the white man, with his much larger hands, is unable to use them. No modern sword grip is more convenient or more tastefully carved.

The Indians of the West Coast are not so particular, and yet on many of their tools there are grooves for the fingers. But a singular departure from this idea of convenience is to be seen on South American and Polynesian weapons, where for the sake of decoration the maker has carved a ridge that would be in the way of the hand.

But the great majority of haftings, shafts, handles, hilts, or grips of aboriginal implements were of some material separate from that of the working part, and attached thereto artificially. The form of this separate handle depended precisely upon the work to be done. The sagacious mind of the savage mechanic has nowhere worked to more perfect advantage. The economy of material and of form to acquire the greatest result with the least effort has been thoroughly explored. After the bare necessities of the case have been met, tribal genius, imagination, and good judgment have had full play.

To make a list of forms of aboriginal haftings it would be necessary to write a catalogue of the varieties of tools enumerated in the table at the beginning of this chapter. If one would examine the stock in a modern hardware or furnishing store, he would have to look over a great many kinds of tools before he would find a style of simple handle unknown to savages. He might begin with a cylindrical rod, and end with the handiest

device from the Patent Office. There probably never was a more effective grip on a tool than the form used by the Eskimo women for their scrapers nor those on the Malay daggers or kris. A classification of haftings as to shape would commence with a mere stick or withe or fork of a sapling, and pass through a series of improvements ending with one in which the hand would be covered so that every finger and every muscle would have full play in every direction for pushing or pulling or rotary motion. This subject has never been worked out by a trained anthropologist.

The methods of attaching the handle to the working part are more ingenious than the grip itself. The following are the principal types:—

1. Doubling a pliant hoop or sapling of wood about the working part.
2. Fastening the working part to a shoulder on the handle or to a forked stick.
3. Inserting the working part into a hole or groove or mortise in the handle.
4. Inserting the handle into or through the working part.
5. Binding the working part into a sling, which either encircles or covers it.
6. Seizing.
7. Gluing.
8. Rivetting.

In almost every section of North America occurs the "grooved axe," and there grow a great many varieties of wood, like ash or hickory, whose saplings will bend double without breaking and will easily split. The Indians were accustomed to take a piece of one of these saplings about six feet long and split it, so that in bending about the groove of the axe or adze or hammer, it would neatly fit. The hafting was completed by securely seizing the sides together near the working piece and at the grip. The method of this seizing will be presently explained. This style might have been seen in the United States anywhere between the two oceans.

In Matthew's "Mountain Chant" two young Navajos are sent out to chop poles for their tent. They had grooved stone axes,

and for handles they bent flexible twigs of oak and tied them with fibres of yucca—that is, they doubled the twigs, inserted the grooved axe-head in the bend, and made all fast with yucca fibre.

It is interesting to note in this account the transformation of a myth. While the story holds on to the oak withe it adopts the yucca binding. The Navajo moved southward into Arizona from Canada, and carried the memory of the oak while forgetting the old-time lashing of raw-hide.

Fitting a forked stick to the working part was thus accomplished. A young tree was selected from which a limb jutted out at the proper angle, having also the right size for the hand. The limb was split off with a goodly piece of the trunk attached, and this was trimmed to a shape so as to fit on the working part, which might be slightly let in, or laid flat with a shoulder on the haft. This process of onlaying and partly inlaying adapts itself to every type of handle used in savagery. The Eskimo even take old plane bits and iron axe-heads procured from whalers and so haft them. The boat-builders of the West Coast and the inhabitants of Australasia of every race make most varied and ingenious uses of the method. It has very great advantage to a savage whose grindstones are frequently of difficult access. The lashing or seizing can be readily done up and undone and the stone or metal working part quickly removed, sharpened, and replaced. The many ways of holding the parts together will quickly be explained.

Inserting the working part into the handle may be a much older and more primitive process. In the Swiss Lake dwellings are found good-sized blocks of antler, into the spongy end of which the poll of a small celt was driven. This block of antler was afterwards itself used as a handle, or again was inserted into another piece to serve therefor. The very same process is in vogue in America in our day wherever the antler or suitable material may be found. The tough exterior of antler and bone, and their spongy interior would almost suggest themselves to the most ignorant savage. While for small tools such as perforators, the rustic and the savage alike know that pith is soft and that the wood of some plants is very tough. This process may be

seen in all stages of development among the working tools of Eskimo and Indians. Arrow heads, awl points, bone prickers and perforators, even scrapers and adze-chisels, may be found in abundance with their working part let in or driven into the handle. The parts are further secured by wrapping and by cement.

The Bongo method of hafting an axe—and this seems to have been the universal practice in true Africa—is to select a piece of wood that has a knot or gnarled place at one end and to drive the tang of the hoe or axe into a perforation through the knob. Fastened in this manner the wedge-shaped tang sticks more firmly in the handle at every stroke. On the other hand, spears and even many garden tools are furnished with a conical socket, into which the shaft is driven more firmly at every thrust.

Says Kalm, the hatchets of the Delaware Indians were made of stone in shape of a wedge, with a groove around the blunt end. To haft it they split a stick at one end and put the stone between it; they then tied the two split ends together. Some of these hatchets were not grooved, and these they held only in the hand.

This is, in fact, a rude variation of the withe style of hafting. The blade is really inserted, however. There is a poor specimen of this kind of work in the United States National Museum from the Pueblos of New Mexico.

Lafitau describes a process which does not exist in modern savagery. I have found this writer's imagination or credulity playing tricks with his statements more than once and am inclined to think the following method of insertion extremely rare.

"Choose a young tree," says Lafitau, "to split it with a single blow and insert the stone; the tree grows and incorporates it in such a manner that it is with difficulty and rarely withdrawn."

A few examples occur in which the end of a stick is split, a ferrule or seizing stopping the rift at the point desired. The inside of the jaws were then trimmed out, the pole inserted and the outer ends tightly bound with green withe or raw-hide.

Inserting the handle into a perforation or a socket in the working part was not a common practice before the age of metals. Africa now affords the best illustrations of this process in rude metallurgy. But the Eskimo harpoon-maker knew how

to mortise holes in his ivory working parts and to make the handle fit therein. Similar devices are not common among other races. The stone workers of Europe, however, were ingenious enough to drill stone axe heads and furnish them with handles.

There is a "doughnut"-shaped stone found in both Americas, in Australasia, and in Europe whose function is not clearly made out. Sometimes it is called a digging-stick weight, and again a club head. But the handle passes through the stone and is held in place by an abundance of cement.

The modern hammer, hatchet, adze, axe, and so forth have all good handles of hickory, but the ancient maker of stone implements fixed his edged and striking tools to handles in some other way. Though most beautiful perforated axes of stone were produced in the European stone age, they are too pretty for use. The working part with an eye for hafting came with metals.

The modern flail, the mediæval "morning star," are of a class whose method of hafting is well known in aboriginal workshops. I speak of the sling hafting. The Indians of the Plains sew up a round stone in green raw-hide, and attach the projecting portions to a stiff handle. The same tribes strengthen the attachment of their great stone mauls in a similar way. Indeed, the withe seems to furnish the rigidity and grip, while the raw-hide does the work of attachment. The long lines of the bolas and the sling are extensions of this method of having a flexible portion between the grip and the working part.

But the savage man's unfailing friend in holding together the parts of his tools is a seizing of some sort. It is so easy, so effective, so readily repaired, and it makes the handle stronger instead of weaker. Hence the Polynesian gentleman, when he goes out to visit or sits in the shade of his own vine and fig-tree, takes along a good quantity of cocoa fibre and braids it into sennit. If the reader never saw a roll of sennit, it will pay him to visit the nearest ethnological museum for this sole purpose. The uniformity of the strands, the evenness of the braid, the incomparable winding on the roll or spool, as one might call it, constitute one of the fine arts of Oceanica. But prettier still are the regular, geometrical wrappings of this sennit when it is designed to hold an adze blade and handle in close union. While

speaking of this combining substance, it may as well be said that in the building of houses the framework is held together entirely by the braided sennit. The strakes of a boat are united by its means. In short, whatsoever is wrapped for amusement or seriously, and whatsoever is nailed or screwed or pegged or glued in other lands, is in this region united by means of this textile.

The peoples of the world who live north of the tree line, and many who dwell in more temperate zones, have discovered the virtue of raw-hide. The Eskimo spends many hours in cutting out miles of raw-hide string, or babiche, of all degrees and sizes. This he uses in holding together not only the parts of his implements, but in manufactures of every kind. It is a marvellous substance. Frost that will snap steel nails like glass has no effect upon it. When it is put on green and allowed to dry, it shrinks nearly one half, binding the parts immovably.

Further south, as well as in the Arctic region, the tough sinew is taken from the leg of the deer. It is shredded as fine as silk, spun into yarn, and then twisted or braided into cord. This has no end of uses, not only in tool making, but in all arts where the greatest possible toughness and pliability are demanded. It serves to make a secure ferrule on the awl handle, to strengthen the bow, to hold feather and head on the arrow. It has an economic use for every day in the year.

All aborigines found out the art of uniting the parts of tools by means of strings, made of the best textile the country afforded. Whatever deficiency they suffered in their materials or rude tools was met by string of some kind. The Fuegians are very clever in the manufacture of harpoons with long shafts. The barbed heads of bone are securely attached by string, and the Eskimo unites thus the many parts of his harpoon so ingeniously that if one be broken the pieces cannot be lost.

The poorest savage can make glue of some sort, and—which cannot be too often repeated in view of the frequent scandals heaped upon them—they will in Australia, or in Guiana, or in North America, tell you the best formula for glue that can be made on that spot. The coast tribes and the Shoshonean tribes of Western America produce excellent animal glue for holding

together the fibre of the sinew backing of the bow. The Eskimo makes cement of blood. The Utes and the Apaches, the Mohaves and the Pimas, always carry a stick, on the end of which is a mass of pitch or mezquit gum ready to heat and cement their arrow heads.

"The Hurons," writes Sagard, "with small, sharp stones extracted blood from their arms to be used to mend and glue together their broken clay pipes or pipe-bowls (*pippes ou petunoirs*), which is a very good device, all the more admirable, since the pieces so mended are stronger than they were before."

For cements the Panamint Indians, of South-western California, used a glue made by boiling the horns of the mountain sheep, pitch gathered from the Nevada nut pine (*Pinus monophylla*), and a gum found upon the creosote bush (*Larrea Mexicana*). In its crude form the larrea gum occurs in the shape of small, reddish, amber-coloured masses on the twigs of the shrub, and is deposited there by a minute scale insect (*Carteria larrea*). The crude gum is mixed with pulverised rock, and thoroughly pounded. The product, heated before applying, was used to fasten stone arrow-heads in their shafts.

The karamanni wax or pitch is prepared as follows: the basis is a resin drawn by tapping from a tree (*Siphonia bacculifera*), and is mixed with beeswax to make it more pliable, and with finely powdered charcoal to make it black. While in a semi-liquid state it is run into a hollow bamboo, or allowed to harden in the bottom of a buckpot. It is used as pitch to fill up crevices in woodwork, as, for instance, in boat-building, to fix the heads of arrows in their shafts, and in similar work.

Quite similar in tenacity is the "black boy gum" of the Australians, used in great profusion in the manufacture of their implements.

Rivetting together the parts of a tool is by no means unknown to savages. The same process is also applied to other sorts of joining. Metallic rivets were not employed, but little trenails or trunnels of bone or wood or antler. In some of the woman's knives brought home from Greenland the parts are united by means of little pegs or trenails of antler. The parts of harpoons are also thus joined. After the use of metal became common

among these people, they came to be very expert at rivetting their knife-blades of various kinds upon the handles.

And now it will be possible to follow the common tools of savagery in the order laid down in the classification above.

The jack-knife, the drawing-knife, and implements of that class are indispensable to the lowest grade of mechanic. When only stone is available, he fabricates his knife of stone; under other conditions, of the teeth of sharks and beaver, or of shells. But nothing demonstrates his absolute dependence upon the knife so convincingly as his willingness to throw the stone blade away and substitute one of metal at his first contact with a higher race. He will hold on to his clan system and his myths, but the stone knife must go. For working in ivory, horn, antler, bone, wood, in short, in any substance that may be whittled, the knife is the standard tool. For cutting softer bodies, as food, the knife is equally in vogue.

All American aborigines made knives of stone, chipped or ground, as the occasion or the natural resource demanded.

The African used his assegai for many purposes of the same sort, while throughout the Eastern Archipelago bamboo knives are in vogue, made while the stalk is green, and thus dried and charred to give them edge.

The Eskimo and Indians in whittling cut toward the body, and frequently make the handle of the knife long and curved so that the end will fit on the muscle of the forearm, to give a stronger grip and leverage. The modern curved knife only takes the place of one with stone blade, and it may now be seen throughout the whole intercontinental area from Lapland to Labrador.

The Polynesians had no other knife than a piece of bamboo cane. The serrated edge of the tool was formed in the extreme outer rind of the bamboo, and when the material has been recently split this edge is very sharp. And Ellis expresses his astonishment at the facility with which a large hog could be cut up with no other instrument.

The readiness with which the peculiar structure of the cane and the bamboo has been seized upon everywhere for domestic knives, assists in the interpretation of the oft-repeated maxim that similar inventions spring from like environments and stress.

The shears of savages do not work like those of the civilised. There is not a pair of cutting edges, one working along the other. There is only one cutting edge, and the other piece is held at right angles. Indeed, there is no cloth or ribbon to be cut, only skins and human hair. The savage mother holds a bit of wood or leather against the child's head and haggles off the ends of the hair with a sharp stone, or a shell. The finishing touches are given with a fire brand. This practice was common among all American tribes.

For cutting the skins of animals the modern shears were preceded by the woman's knife, called *ulu,* among the Eskimo. This consisted formerly of a blade of chert inserted into a handle of ivory or wood, and glued fast. But even conservative Eskimo women obeyed the law of utility, and sustituted iron blades on the advent of the whalers. All other women in the primitive world used similar shears, cutting skin as the modern saddler does, who has not a pair of shears in his shop.

The Algonkian Indians of North America secured splints of elm, birch, ash, and other hard woods of uniform thickness, by beating a log until the annual layers were loosened. They were then peeled off, scraped, and dressed into ribbons of the same width and woven into basketry.

For the jack-plane and the smoothing-plane, savagery has no mechanical substitute. There the set gauge to determine the thickness of the shaving is the thumb, which in lieu of a better one, does tolerably well. The drawing-knife, the spokeshave, and such refined modern cutting tools, are all the lineal descendants of the primitive jack-knife, or curved knife, indeed, of the flake of flint or other hard stone struck off and used at the cutting edge. Lucien Turner, however, collected genuine little spokeshaves, with blades of chert, for dressing whalebone.

The mechanic's edge tools in civilization are axes, adzes, and chisels of some sort. In general terms these work across the grain, with the grain, and into the grain. The lines are very feebly drawn in savagery. The very same stone blade is inserted into an antler and mounted on a helve for an axe, attached to a forked handle for an adze, and bound to the shouldered end of a straight handle for a chisel. The axe of savagery is a laborious

tool, requiring great force and doing little execution. The adze is better, and in the culture areas where great trees abound near water, no aboriginal work is more attractive than the canoes tooled down with stone adzes. The chisel of savagery was seldom struck with a mallet. It was shoved from the workman after the manner of the modern trimming-chisel, and employed chiefly in connection with fire, as in hollowing out canoes. The invention of the tenon and mortise, the peculiar creation of the chisel, belongs to a culture-status in which domestic animals and extended commerce enter. Both in the East and the West Indies excellent adze and chisel blades were made of the great clam shells.

The Munbuttoo have an adze of iron which strongly calls to mind the socketted bronze celts of Scandinavia. A fork of a sapling serves for handle, one limb remaining long for the hands, the other cut short and inserted into the conical socket of the blade. "With this tool," says Schweinfurth, "Monbuttoo roughhew their wooden vessels, subsequently smoothing and carving them more finely with a one-edged knife."

The inhabitants of the Nubian part of the Nile valley use this mattock-like tool almost exclusively for all kinds of woodwork, while a real hatchet is never employed.

Saws are used by workmen in civilisation for cross-cutting and for ripping. The savage does not use the saw for the latter purpose. He gets out puncheons and planks by means of enumerable wedges distributed along a great log. Bone and harder substances he rips by boring a series of holes through the substance in a straight line, and then breaking the pieces asunder with a blow. The rip-saw is in full force in China, Japan, and Corea. In ancient Egypt bronze saws were used, but the ripping was done single-handed.

The cross-cut saw, on the contrary, is one of the oldest tools. There is no tribe of men who do not know how to haggle off a piece of wood by sawing with a jagged stone. This same method is used in separating antler, horn, ivory, and other industrial substances. The archæologists find among their collections blades of hard material serrated, and appearing to have been designed for saws. They will do the work excellently, and they seem to

suit no other purpose. This tool must not be confounded with the stone-cutter's method of sawing stone and other hard substances by using sand and water.

Moreover, the ancient Mexicans and some Polynesian islanders knew well how to make saws by inserting bits of jagged stone and the teeth of sharks in a groove in a handle of wood or by sewing them with sennit upon the side of a thinner piece. The Australian saw-teeth are fastened to the handle with the "black boy gum."

But the most efficient saw in savagery was a thin piece of stone, wood, or other soft substance used in connection with sand, to be described in the chapter on lithotechny.

The second class of common tools that have their ancestry in savagery are those that are used for abrading and smoothing surfaces. When the potter has finished shaping a vessel, the surface is corrugated and covered with finger prints. By the use of bits of leather, or gourd, or stone, she scrapes away these inequalities, and leaves the surface without a mark upon it.

The box-maker, the boat-builder, the fabricator of war implements, the worker in bone and horn and ivory, take away the inequalities from the surface of their industrial products in two ways—by scraping and by grinding, as is done today. The cabinet-maker with his wood rasps and his steel scrapers has his counterpart in the savage worker with scraping tools and grinding tools of stone. The Fijian war-club maker, the American boat-builder, the African metal-worker, grind and scrape away a deal of their material in bringing the article into shape. The North American Indians use sandstone, or fish skin, or grass; the South Americans, the palate bones of certain fish, and the rough leaves of trumpet wood, *Cecropia peltata*, or of the *Curalitta Americana;* the Polynesians employ pumice and coral; and each location has its peculiar method of procedure.

When Europeans first opened trade with the South Sea Islanders, steel fish-hooks were among the things pressed upon the attention of the natives. But these last, or the fish, we had better say, like the mother-of-pearl hooks better. But the metal points were sharper, so nails and wire were in great demand. Perceiving in the nails a close resemblance to the scions from

the root of the breadfruit tree, the fishermen actually planted some, expecting them to grow. There were no files to be had, so the nails were formed into shape and ground and bent by the use of stone. The introduction of the file wrought as much change in native art here as it did in the New World.

All of these processes of breaking, boring, sawing, cutting, grinding, and polishing are shown by Professor Putnam in his paper on the manner in which bone fish-hooks were made in the Little Miami Valley. A series of partly finished examples were taken from a grave in the Madisonville Cemetery, near Cincinnati.

Engraving, or ornamentation answering to the graver's art, was produced on softer substances by means of a blunt pointed, hard tool, and the design traced out by a series of creases on the surface. This is done on wood, bone, and pottery. But most of the decoration of this class was accomplished by scratching away the material with chips of flint or other hard substances. The Eskimo used to rely upon the hard tooth of the beaver, the Polynesian wrought with sharks' teeth, and in other places hard shells and gravers of flint were employed.

The Indians of Central America are expert in the engraving and painting of calabashes. With a pointed instrument they work out designs upon the surface of a dish and give relief to the ornamentation by roughening the intervals. In painting them the blue is made with indigo, the red with anotto, and the black with indigo mixed with lemon juice. The colour is fixed by means of a greasy substance formed by boiling an insect called *aje*.

For giving a polish to surfaces, grass containing silex, very smooth stones, ochres laid on buckskin strips, or the hard hands were quite sufficient. Experiments lately made in the United States National Museum demonstrate that the objects mentioned are quite adequate to the result, with patience and knack. The archæologist is frequently puzzled in studying prehistoric methods of working, because all traces of chipping and sawing are obliterated by the polisher. But, in a great collection of polished objects like that of Commodore Douglas, in New York, or the jade objects in the British Museum, it is hard to believe that every one of them was first battered into its present shape.

Akin to the burnishing and polishing of the surface of differ-

ent wares is the whole genus of greases, oils, varnishes, and other devices for filling the grain of the substance and giving a better shine. The idea of preserving wood by the use of paint and oils hardly entered the savage's mind. The study of paint as a purely decorative matter belongs to æsthetology. But the investigation of surfacing would be deficient if it did not include inquiry concerning paints and varnishes and burnishing powders.

The oil used by the Guiana Indians to anoint their bodies and their weapons is prepared from the crab-wood tree (*Carapa guianensis*). At the proper season the nuts are gathered, boiled and put away until half-rotten. They are then shelled and kneaded into a coarse paste. Troughs of bark, cut in form of a steel pen, are filled with the nut-paste and fixed in a sunny place, slanting, and with the point over a vessel. The oil oozes from the paste and drips into the vessel below. Sweet-scented substances are added to overcome the rancid odour. Palm oil is also obtained by crushing and boiling the seed. The oil rises to the surface and is skimmed off with pads of cotton.

The calabashes of the Sandwich Islanders are dyed in the following manner: When the fruit has grown to its full size they empty it by placing it in the sun. The dried contents are removed through an aperture made at the stalk. In order to stain the shell, bruised herbs, ferruginous earth and water are mixed and poured in until it is full. Then they draw with a piece of hard wood or stone on the outside of the calabash, rhombs, stars, circles, waves, &c. After the colouring matter has remained within three or four days, they are put in an oven and baked. When they are taken out, the figures appear in brown or black on the outside, while those places where the outer skin had not been broken retain their natural bright yellow colour. The dye is emptied out and the calabash dried in the sun; the whole of the outside appears perfectly smooth and shining, while the coloured figures remain indelible.

It is difficult to find a better example of the specialisation going on throughout all history of men in all grades, operated upon by the resources at hand and yet developing the local or tribal technique.

"The split-cane of the Rotang (*Calamus secundiflorus*) is

buried in the leaf-mould in the bottoms of brooks by the Niam Niam until it becomes thoroughly blackened. This dyed material, mixed with the splints of the natural colour, is wrought into all sorts of geometric patterns." The Indians of Washington State and Oregon have discovered the very same fact, and use splints of root, or sprouts, or straws, blackened in the same fashion. The Indian women bury the split roots of the spruce in marshes to get the dark-brown splints for basketry.

The Andamanese paint in water and in oil colours. White clay mixed in water is daintily laid on the body as well as on bows, baskets, buckets, trays, &c. This work is done by women. Oil colours are made by mixing ochres with fat of pig, turtle, iguana, dugong, oil of almond, &c. It is applied to the person as ornament or otherwise.

Finally, the whetstone and the grindstone must find a place in the tool-chest of the primitive man. And they are abundant. Constant reports are sent to the Smithsonian Institution of the finding of huge masses of sand-rock whose surfaces show marks of constant use as grindstones. When it is remembered that every edged tool of stone has been many times ground, the number of these implements reported will not appear astonishing. The whetstone is only a portable grindstone, and those gathered in museums show by their surfaces and grooves what a variety of uses they have served.

Whetstones are found in shell-heaps, graves, and mounds all over the earth, and they are of the best material the locality affords. They are an empirical result of the highest order. Among modern savages the whetstone is universal. In its ancient forms the great variety of grooves and worn places testify to the many kinds of implements to which they once gave point and edge. The Eskimo collections of our museums abound in good hones. The Andamanese wood-worker holds the blade of his adze over the inner side of his left foot and renews the edge with his hone. Many of the stone axes and hammers seen in collections show marks of having also been used as grindstones.

An implement of the greatest importance in the early history of mankind, universal in its use, found on ancient camp sites everywhere, is the hammer stone. It will be minutely studied in

the chapter on stone-working. It seems strange that with all the ingenuity that our race can exercise it is yet necessary to abrade granite in the same way that the ancient Egyptians are represented as doing it, in the same way that primitive man did it, namely, by pecking and battering away the surface a few grains at a time.

But every man and woman in savagery needs a hammer, each in their several industries. The Indian women of North America with hammers of stone break dry wood for fires, crush bones to extract the marrow, pound dried meat into meal for pemmican, drive down pegs for setting the tent, beat the hides of animals to make them pliable. In this last operation they are imitated all over the tropical world by their sisters who hammer cloth out of the bark of trees.

The savage man uses his great hammers in driving wedges, in breaking off stone in the quarry, in mining, and as a pestle in pulverising various materials.

The North-west Coast Indians use a very graceful hammer, which is grasped in the middle like a dumb-bell. The pounding end is flattened out, while the other extremity is usually ornamented by carving. Hafted hammers are common in Eskimo land, in the canoe region of the Pacific Coast and in the buffalo country, each region adopting a characteristic method depending on the work to be done and upon the natural resources.

Prehistoric hammers and hammer heads are among the commonest objects in collections. Those that are used as millstones or pestles are described in the proper place. The object in each case, whether with paint or with foodstuffs, is to crush and to pulverise without mixing any of the detritus of the apparatus with the product. The stone-chipping and flaking tools, developed in savagery and almost lost in modern times, save by the glazier and the gun-flint maker, will be described particularly in the chapter on stone working.

The making of holes by means of a punch struck by another body is the product of the metallic age. The African smith is not only acquainted with the art of engraving on the surface of his knives and assegais with punches, but he also makes holes by the same process. The other savages of the world do not

perforate in this manner, but employ such tools as the needle or awl, thrust through soft substances; the hand perforator, working like a reamer or a gimlet, and the drill operated by a string in a reciprocating motion.

There is no end to the sharp-pointed tools employed by both sexes among lowly peoples. They use them for sewing clothing, tents, utensils, for making basketry and other textiles. They have little stilettoes or prickers of bone no bigger than a needle, and others as strong as a marlinspike. Each one is a device exactly adapted and studied out for its work, so that the archæologist, finding a similar implement in some ancient *débris,* at once begins to set up in his mind the industrial life of a departed people.

With the two palms a drill is rotated after the fashion of the cook in mulling chocolate. It consists of two parts, a shaft of wood, with a point of hard substance lashed to the lower end. A beautiful specimen of this sort is in the United States National Museum, with a delicate point of the Alaskan jade. This would be capable of boring almost any stone object.

From this form, having a point fastened at the end of a shaft, have been invented the bow-drill, the two-handed strap-drill, the pump-drill, and the top-drill. The distribution of these three forms of drills is discussed under the chapter on fire. The same method of changing vertical or horizontal motion into rotary motion would be available alike in creating fire as in boring holes. Mr. Hough, who has studied the fire problem thoroughly, is decidedly of the opinion that the mechanical drill is older than the fire drill—in short, that the heat developed in boring holes led up to the creation of heat by this means.

The Samoan drill, used in boring the pearl-shell shanks of fish-hooks, is precisely the same as the pump-drill used by the Pueblo Indians of the United States. In the Samoan example the crossbar or handle does not seem to have been perforated for the shaft.

The Hawaiians were acquainted with the rotary drill for boring. In the island of Lombok Wallace saw the primitive gunsmith at his work.

"An open shed with a couple of small mud forges were the

chief objects visible. The bellows consisted of two bamboo cylinders, with pistons worked by hand, having a loose stuffing of feathers thickly set round the piston, so as to act as a valve. An oblong piece of iron on the ground was the anvil, and a small vice was set on the projecting root of a tree outside. The apparatus for boring the barrels was a strong bamboo basket, spheroidal in shape, through the bottom of which was stuck upright a pole about three feet long, kept in its place by a few sticks tied across the top with rattans. The bottom of the pole had an iron ferrule and a hole in which four-cornered borers of hardened iron can be fitted. The barrel to be bored is buried upright in the ground, the borer is inserted into it, the top of the vertical shaft is held by a cross-piece of bamboo with a hole in it, and the basket is filled with stones to get the required weight. Two boys turn the bamboo around. The barrels are made in pieces about eighteen inches long, which are first bored small, then welded together upon a straight iron rod."

The last type of common tools whose evolution commenced with early man to be mentioned here is the series of gripping implements. Tongs, pincers, vices, and all such things are represented in the aboriginal tool chest. All these devices are temporary expedients for holding two or more objects firmly together until they can be made fast by sewing or lashing, or they are designed for holding on to hot objects or small objects while they are being wrought. The words "vice," "tongs," "nippers" cover the three classes.

In the collection brought home by E. W. Nelson from Alaska there is a very primitive vice just as effective for the work in hand as one made with a screw would be. The woodworker is about to make a dipper out of a thin spruce board. He rolls one end of the board into a cylinder after thoroughly boiling it, leaving six inches of the other end still free and unbent to be fashioned into a handle. To hold the bent end fast and tight to the part of the board against which it rests until it could be secured by sewing with whalebone or tough fibre, two sticks a little longer than the board is wide or the cup is deep are laid parallel to each other, one without and one within the cylinder, and their projecting ends tightly lashed together with fine, wet

spruce root. In drying the root contracts and holds the surfaces together water-tight. A block of wood is then fastened in one end of the cylinder with wooden pegs, and the dipper is completed. Several pieces that are in the United States National Museum have been made in the same fashion, and doubtless with a vice as crude and effective as Mr. Nelson's specimen. The capability of raw-hide and sinew for shrinking and holding things together so that they could not budge was well known and constantly utilised all over North America. These and other savages also knew that twisting a cable shortened the length and served as a press.

The Bongo smith uses a smooth gneiss boulder for his anvil, another smaller one for a hammer, with the cunning hand of the operator for a handle. For pincers he splits the end of a stick of green wood, seizes the hot mass between the jaws, and holds them firmly together by an iron ring slipped along the stick. The same tongs are mentioned by Speke among the Wanyamuesi.

In the enumeration of the chest of tools belonging to savages we must not omit the teeth, which among seamstresses and other craft people could not be dispensed with. Every osteologist has noticed how the teeth in the crania of savages are worn to the socket, and we are frequently told that this arises from the large quantity of sand in the food. Basket-makers all the world over use their teeth in peeling and cutting their strands or filaments, and the Eskimo boot-maker uses her jaws for crimping irons. Whoever has seen an Eskimo boot neatly puckered all around the edge of the sole will not be surprised at the brevity of the good woman's teeth when he comes across her skull in the museum.

An original and very simple press is found among the Haida of Queen Charlotte Sound. Bancroft says, "After a sufficient supply of solid food for the winter is secured, oil, the great heat-producing element of all northern tribes, is extracted from the additional catch, by boiling the fish in wooden vessels, and skimming the grease from the water or squeezing from the refuse. The arms and breasts of the women are the natural press in which the mass, wrapped in mats, is hugged. The hollow stalks of an abundant seaweed furnish the natural bottles in which the

oil is preserved for use as sauce, and into which nearly everything is dipped before eating.

The subject of the knots used by savages would require a book. The arrow-maker, to begin with, has great faith in tucking the ends under. So has every implement user who desires to separate the parts readily. The manipulator holds his left thumb on the end of a string, and in wrapping simply covers up this end. At the finish the last end is tucked under and concealed so as seldom to get loose. The different hitches and knots of the sailor are all well known to the uncivilised. On Polynesian spears and nets will be observed the whole series of ties that one would see on a ship.

The Arctic peoples have developed an entire series of tools and implements that have been made to take specialised forms by reason of the snow and ice. They put diminutive snow-shoes on the bottoms of the long staves which they use for canes or alpenstocks. From huge plates of bone taken from the scapula or the jawbone of the whale, or from slabs which they split from driftwood, they construct shovels, lining the cutting edge with thin plates of walrus ivory. To the back a handle is securely lashed by means of raw-hide. This is for removing the soft snow. But against the hard ice and frozen snow they have also a remedy in the form of a pick of walrus tusk. This may be lashed to a straight handle to form a crowbar, or at an angle to constitute a pickaxe. These are held to the handle by walrus hide as tight as a tire on a wheel by wrapping when the skin is green. The shrinking binds the parts so tightly together that the whole tusk of a huge walrus is worn quite out before the lashing comes loose.

They make tiny scoops and strainers for dipping the broken ice from a seal hole, and paper-knife clothes whisks to scrape the snow from clothing. The eyes are protected by snow goggles, which are cups of wood with narrow slits cut across the bottoms and inverted over the eyes. At once these devices keep the annoying snowdrift out of the eyes, and prevent the brilliant reflection of the snow from blinding the hunter. They put under their boots ice creepers also made of ivory, and precisely similar to those worn in Europe. The trowel for cutting out blocks of

snow and building up the cunning, dome-shaped habitations must not be overlooked.

Having to do his work with gloved hands, the Eskimo has thought out an ingenious series of toggles, swivels, detachers, "frogs," buttons, any one of which will do its work, and some of them enable the hunter to make fast and cast loose frozen lines after a whole day's drive. He also has an ingenious wrench for winding up his sinew-backed bow.

It is time to turn to the primitive knowledge of mechanics. By the mechanical powers is meant that series of devices which enables one man to do the work of several by the interchange of time and direction and momentum, namely, the *inclined plane, the wedge, the lever, the wheel and axle,* the *pulley,* and the *screw.* One does not expect to find all of these full fledged in the lowest savagery, but the intimations of them all are to be looked for among very primitive folk. It is not true that any mechanical power has been lost. The great engineering feats of the megalithic epoch were performed with powers well known in our day, acting through co-operation.

The screw, the pulley, and the wheel and axle, are known to savages only in a very rudimentary way. Dr. Boas represents a plug used by the Baffin Land Eskimo to thrust into a spear wound on a seal to prevent the escape of blood. A sort of "thread" is cut on this wooden plug, and if the object be entirely a product of native thought, is the most primitive example of the screw.

The Eskimo also approached a knowledge of the power of the screw in the tightening apparatus on the back of their bows and in their wolf traps. They know that tremendous power was accumulated by winding a cable of sinew by means of a lever. A very ingenious device, involving the lever of the third kind, and coming as near to the screw as we shall be able to find in savagery, is the cassava strainer of the Guiana Indians. After the roots are ground or grated, the pulp is placed in a long woven bag or cylinder, in which the warp and weft of tough splints run spirally and diagonally, so that when the two ends are forced together the cylinder becomes short and wide, and when they are pulled apart, it becomes long and slender. As soon as the squeezer is drawn into its shortest length and filled with pulp,

one end is suspended from a tree overhead, and one end of a log of wood is thrust through the lower loop of the squeezer, the other extremity of the log resting on the ground. The woman then sits on the log, and by her weight gradually elongates the bag and squeezes the poisonous juice out of the mixture, the interstices in the woven fabric of the press acting at the same time as a sieve. These cassava squeezers are to be seen in most museums, together with the graters, which are nothing more than flat blocks of wood into whose surfaces little bits of flinty rock have been firmly set. The whole apparatus is entirely aboriginal, and the basket work of the press constructed with exceeding neatness and skill.

The pulley may exist, and did primarily exist, without the wheel, in the form of the "dead-eye." Any line drawn around a fixed object, as a tree, and pulled in one direction for the purpose of moving an object in another direction, involves the principle of the simple pulley. All savages know this device, both for hoisting and for horizontal work.

The Eskimo have gone beyond that, and know how, by means of a long line, to construct a compound pulley and draw from the water the carcase of immense sea mammals.

The nearest approach to a pulley among the American Indians is the woman's device for drawing the skin covering to the top of the tent poles. When the women are ready to set up the tepee, they spread the covering out on the ground. Three poles are thrust under the covering, their small ends passing through the orifice and being loosely fastened together. A rawhide line is made fast to the upper part of the tent, and passed over the juncture of the poles, which are then stood upright. The tent is hauled up to the top, the bottoms of the poles are spread out, other poles are inserted, and the covering is stretched. When about to strike, the same apparatus lets the cover down.

"In Central Syria and Philistia, for raising water, a large buffalo-skin is so attached to cords that, when let down into the well, it opens and is instantly filled; and being drawn up, it closes so as to retain the water. The rope by which it is hoisted to the top works over a wheel, and is drawn by oxen, mules, or camels, that walk directly from the well to the length of the rope

and return, only to repeat the operation until a sufficient quantity of water is raised." It is very easy to imagine this wheel to be either a sheave, a roller, or a fixed beam, one becoming the other by the law of eurematics. The origin of the wheel is not made out. The precise mechanism of those we do see on Egyptian, Assyrian, and Grecian chariots and waggons is not clear to the minds of modern wheelwrights. The other wheel, used as a mechanical convenience in changing the direction of a force or as a mechanical power, is still more difficult to follow up.

The roller is older than the wheel. One day, Mr. Henry Elliott came near catching a company of men inventing the roller. A crew of Eskimo rowed to a gravelly beach in one of their skin canoes. The craft was heavily laden, and they had either to get into cold water, to lift all the freight ashore and then carry the boat so that the gravels would not cut the very thin and delicate sealskin bottom, or they had to set their wits to work. As on many another occasion the inventive spirit predominated, and they placed a row of inflated seal-skin floats in front of the umiak, and rolled her high and dry up on the beach by this means. The very recent adoption of the pneumatic tire on bicycles and racing sulkies, after this explanation may leave the impression that Solomon was not altogether wrong when he said, "There is no new thing under the sun."

Long before the roller was invented, the pole road afforded an easy and slippery method of conveyance. Im Thurn describes the portage of a boat in the interior of Guiana. "We were obliged to carry our boat across the portage, which is about a quarter of a mile long, up and then down a very considerable hill. Our men laid rollers all along the path, then harnessed themselves by a rope attached to the bows of the boat, and drew her merrily over in a very short time." The same method is in vogue in all mountainous countries for getting logs down to the level, and Robinson Crusoe would not have been compelled to dig canals if Daniel Defoe had been a South American Indian.

The windlass, the capstan, the winch, are modern appliances to convert time and momentum. The ancient engineers had rollers and chutes and greased ways. Even in savagery they could remove very heavy logs to the seaside, and stones weighing

hundreds of tons were brought to the places where they were to be set up. Co-operation in great labour took the place of invention; but it must not be forgotten that this working together was an invention in social order of the highest value.

The inclined plane is found everywhere in ancient and modern engineering. The Pacific Coast Indians, in erecting their totem posts, and in laying up great crossbeams, use skids, guys, shore poles, and the parbuckle, besides their own main strength. In Africa, Corea, and in North-western United States, the porters draw their loads up on their backs by a strap which also acts as a parbuckle.

The lever and the wedge are well-known devices to savages. It has been previously mentioned that with wedges the California Indians felled trees, the British Columbia Indians split out immense planks, the metallurgists broke off masses of ore, and the engineer lifted great weights. The wedge was also understood in tightening the lashing of haftings, and in working clamps for holding objects together.

"I was interested," says Sir Samuel Baker, "in the mechanical contrivance of the Lobore for detaching the heavy metal anklets, which, when hammered firmly together, appeared to be hopelessly fixed in the absence of a file. The man from whose ankle the ring was to be detached sat on the ground. A stick of hard, unyielding wood was thrust through the ring, and both of its ends rested on the ground. A man stood on one end, and a stone was placed on the other end of this bottom stick. A lever of tough wood rested on the top of this stone as a fulcrum, one end passing through the ring. When the long arm was pressed down, it opened the jaws of the manacle, and released the man's foot.

That system of counting and weighing and measuring, which lies at the basis of all tool-using, now demands our serious attention. To begin with, the sense of number is universal, and is found in a rudimentary state among the animals, but they have no notation nor any mechanical invention for recording numbers. Most of the tribes of men have adopted the quinary notation. But the only numerals in use among the Andamanese are those denoting "one" and "two," and they have no word to express

specifically any higher figures, but they indulge in some such vague terms as "several," "many," "numerous."

Among the North American savages the universal method of keeping account was by means of tally sticks or shells or stones or notches, one for each unit being laid away or kept after some fashion. In the United States National Museum is an old census of a tribe of Comanches. It is simply a collection of bundles of straws, one for men, one for women, and one for children. Besides this example are many bundles of gambler's counters, which are simply short sticks tied together. One of the most charming things Mr. Wallace ever wrote is telling how the rajah of Lombok took the census.

Memory-helping devices for numbers, such as notched sticks or knotted strings, have a wide distribution. The message-sticks of Australia, the *rush* of the Pelew Islands, had their counter parts everywhere. The Maoris, says Tregear, used notched pieces of wood for this purpose, specially for recording genealogies. In China, the invention of memorising by knotted cords is attributed to the Emperor Luy-jin. Turner in his account of Nui (Ellice Group) says, "Tying a number of knots on a piece of cord was a common way of noting and remembering things among the South Sea Islanders." In Hawaii the tax-gatherers, although they can neither read nor write, keep very exact accounts of all the articles of all kinds collected from the inhabitants throughout the island. This is done by one man; the register is a line of cordage, distinct portions of which are allotted to various districts, which are known from one another by knots, loops, and tufts of different shapes, sizes, and colours. Each taxpayer has his part in this string, and the number of dogs, hogs, pieces of sandalwood, &c., he has to furnish is well defined."

In every patent office there is an examiner of instruments of precision. The very mention of a standard yard or metre, of square feet or acres, of cubic inches or centimetres, of delicate balances and platform scales, of gallons or bushels, of degrees and their subdivisions, of clocks and chronometers and calendars, of pounds, shillings, and pence, awakens in the mind a consciousness of the nicety with which things are measured or weighed or paid for in our times. Only the astronomer, the chemist, the

physicist, the microscopist, the great banking houses, know to what a degree of finesse all of these devices for getting the correct figures have attained. It will be interesting to note how, in the earliest industries the places of all these diversified measuring apparatus were filled. The correct metric or chronometric data within the exigencies of each tribal life will give a fair idea of the status of that tribe. It is well known that the history of navigation is almost the history of clocks, that speed in trains is allied to red glass and signalling, that the accuracy of the cubit is the gauge of the quality of ancient architecture, and, in a general way, the history of metrology is the history of civilisation. A separate book on this subject would be worthy of preparation, only the data are so meagre.

Metric apparatus and instruments of precision include all devices covered by what in the school arithmetics is denominated "tables of weights and measures." The measuring appliances involved, and their numerical values in different ages constitute the science of metrology. This alone has had a very interesting elaboration. The lowest peoples have their standards of measuring and comparing quantity. Out of these have grown the modern processes.

The scale or balance was known in America before the Discovery. The Peruvians made beams of bone, suspended little nets to each end, supported the beam at the middle by means of a cord, and used stones for weights. The transition from the balance to the "steelyard" is not easy to make out.

The standards of compound arithmetic were very low among the Andamanese. About forty pounds was a man's load, and anything above that would simply be more than a man's load. Size was rated by well-known natural objects, seeds, fruits, nuts, &c. Capacity was counted by handfuls, basketfuls, bucketfuls, canoefuls. There is no prescribed form or dimensions for any object. No tallies were kept nor counters, and this is very low down, because all American tribes knew the use of tallies. Distance was spoken of as a bowshot, or as from there to there, indicating the limits. Fifteen miles, about, was a day's journey, and over that was said to "exceed a day's journey."

Those ancient manufacturers and builders had no government

standards of measuring their work, but referred everything to their bodies. This system was far more accurate among rude peoples, where anthropometric differences between the sexes and between individuals were very slight. Many witnesses confirm the opinion that every weapon, or chunkey pole, had its proportion to the owner. Dr. Matthews says that the Navajo pole for the Great Hoop Game was twice the span long, and Mr. Dorsey found that the Omaha arrow had to measure from the inner angle of the elbow to the tip of the middle finger, and thence over the back of the hand to the wrist-bone. I have examined many hundreds of quivers, and have always found the arrows to be of the same length, while those of the tribe resemble in general appearance, but vary slightly in length for each man. Dr. Dorsey found the Naltunne, on Siletz Agency, in Oregon, using the double arm's length, the single arm's length, half the span, the cubit, the half cubit, the hand length, the hand width, the finger width (1, 2, 3, 4, 5), from the tip of the elbow across the body to the end of the middle finger of the other hand. In most of these cases the starting-point is the meeting of the tips of the thumb and index finger.

Among the Aztec or Nahuatl and the Maya, the two most cultivated stocks of North American aborigines, Brinton finds no words for estimating quantity by gravity, no weighing terms. For extension the human body and, largely, the hand and the foot furnished standards of measuring. Among the Mayas the footstep or print or length of the foot was very familiar, and frequently in use by artisans, as well as the pace or stride.

Quite a series of measures were recognised from the ground to the upper portions of the body, to the ankle, to the upper portion of the calf, to the knee-cap, to the girdle, to the ribs or chest, to the mammæ, to the neck, to the mouth, to the vertex. Other measures were the hand, finger-breadths, the span, half around the hand, as in measuring for a glove, the cubit, the fathom. Journeys were counted by resting-places.

In Aztec metrology, the fingers appear to have been customary measures. The span was not like ours, from the extremity of the thumb to the extremity of the little finger, nor the Cakchiquel, from the extremity of the thumb to that of the middle finger; but

like that now in use among the Mayas, from the extremity of the thumb to that of the index finger. There were four measures from the point of the elbow—to the wrist of the same arm, to the wrist of the opposite arm, to the ends of the fingers of the same arm, to the ends of the opposite arm, the arms extended always at right angles to the body.

The Aztec arm measures were from the tip of the shoulder to the end of the hand; from the tip of the fingers of one hand to those of the other, from the middle of the breasts to the end of the fingers. The *octocatl* or "ten foot pole," approximately, was the standard of length employed in laying out grounds and constructing buildings. The road measure of the Aztecs was by the stops of the carriers, as in Guatemala. The Aztecs were entirely ignorant of balances, scales, or weights. The plumb line must have been unknown to the Mexicans also.

Federal money and the metric system as applied to the mechanism of exchange are modern returns to very primitive modes of reckoning values. The basis of money is at times a shell, a bead, a robe, a skin. The purchasing power of the unit is fixed in each case. And among certain tribes there is a table of moneys, such as two elk teeth equal one pony, eight ponies equal one wife. The principle involved does not seem to be different from that of our own standards, namely, to have some rare and portable object for standards.

The Bongo make iron spade-shaped disks, which represent their coined money. The hoe-and-spade currency is widespread in Africa. Crosses of copper, and ingots of native iron hammered out from nuggets of iron ore pass for currency. Furthermore, to give to these objects the further semblance of coinage the manufacturers put a certain twist or mark on the object, which is in effect a tribal mark, and suggests the coins of the realm. These marks are not government stamps, however, and they do not raise the objects above the ranks of tokens.

Although the native canoe-builders in the Louisiade Archipelago work with adzes made of hoop-iron, the payment for their work is made in stone axes, ten to fifty of these being the price of a canoe. The stone axe is still the accepted medium of exchange in large transactions—pigs, for instance, and wives are

valued in that currency. It is only fair, by the way, to mention that the purchase of a wife is stated by the natives not to be such in the ordinary sense; the articles paid are, they say, a present to the girl's father. In Mowatta, sisters are specially valued, as they can be interchanged with other men's sisters as wives.

Almanacks and clocks, how indispensable to all our activities! They were never absent from human traffic. The Andamanese have natural calendars, partly in the sky, partly in nature around them. Having no numeration, they did not count the moons in a year, but noted the cool season, the hot season, the rainy season, in their proper order. The year was also divided into twenty minor seasons, named for the most part after trees which flowering at successive periods, afford the necessary supply to the honey bees. These flowers are used to name the children born while they are blooming, and these names, added to the prenatal name conferred by the parents, constitute the denomination of the person until maturity or marriage.

The phases of the moon and its connection with the tides were both designated by appropriate terms. Of the starry host they take little notice, confining their special observations to Orion and the Milky Way.

They knew the four points of the compass, and the prevailing winds by name, and distinguished certain meteorologic phenomena. So much for the calendar.

As to clocks, they had no mechanical device for marking time of day, but had thirteen separate expressions for known parts of the twenty-four hours. But these were extremely vague, and the divisions over-lapped one another. For that matter, clocks and watches are extremely modern devices.

The day's journey is often mentioned as a fixed distance. This is only true within wide limits, and it scarcely ever exceeds ten miles for marching. "The Indians, finding that their wives were so near as to be within one of their ordinary day's walk, which seldom exceeded ten or twelve miles, determined not to rest till they had joined them."

In these journeys the Canada Indian hunters are said to stand a stick in the snow and make a mark along the shadow as they pass some well-known spot. The women and old men coming

later note the angle between the former and the present position of the shadow, and they are thereby enabled to regulate their future speed.

The Zuñi Indians know well that the light of the rising sun falls on the same spot but two days in the year, and that at noon the shadow of a pillar lengthens and then shortens back to the same spot in the same period. They have a pillar dedicated to astronomical observations. On many houses in the Pueblo there are scores on the wall opposite windows, or loop-holes for the purpose of recording the movements of the sun. There are also pillars to be seen in other parts of the world which could possibly be dedicated to the same end, since such a feat is performed by at least one tribe.

"Each morning, just at dawn, the Sun priest, followed by the master priest of the Bow, went along the eastern trail to the ruined city of Ma-tsa-ki by the river side, where, awaited at a distance by his companion, he slowly approached a square, open tower, and seated himself just inside upon a rude ancient stone chair, and before a pillar sculptured with the face of the sun, the sacred hand, the morning star, and the new moon. There he awaited with prayer and sacred song the rising of the sun. Not many such pilgrimages are made ere 'the suns look at each other,' and the shadows of the solar monolith, the monument of Thunder Mountain, and the pillar of the gardens of Zuñi lie along the same trail; then the priest blesses, thanks and exhorts his father, while the warrior guardian responds as he cuts the last notch in his pine-wood calendar, and both hasten back to call from the housetops the glad tidings of the return of spring. Nor may the Sun priest err in his watch of time's flight; for many are the houses in Zuñi with scores on their walls or ancient plates embedded therein, while opposite a convenient window or small porthole lets in the light of the rising sun, which shines but two mornings of the 365 on the same place. Wonderfully reliable are these rude systems of orientation, by which the religion, the labours, and even the pastimes of the Zuñi are regulated."

In the Moki village of Wolpi, Arizona, there are means of telling noon and midnight. Fewkes says: "When the sunlight through the kibva [sacred chamber] entrance fell in a certain

place on the floor and indicated noon time each of the four priestesses made a single *baho,* consisting of two willow twigs equal in length to the distance from the centre of the palm of the hand to the end of the middle finger." Again, "At 12.15 the head priestess ascended the ladder and minutely examined from the roof the position of the stars. She looked anxiously for some star in the constellation of Orion or the Pleiades, but the stars she sought were hidden by a cloud, and she at last decided what she had in mind by observing a bright star in the western sky. Then she went down the ladder and announced that the time had come for the midnight ceremony."

The ancient Polynesians had thirteen months in their year, regulated by the moon, and once in a while dropped out a moon. They had separate names for every night in the lunation, and twenty-seven separate names for time of day during each twenty-four hours..

In the long voyages which they undertook about six hundred years ago, they made excellent use of the stars both for direction and time of day. In another chapter some mention will be made of fire as a time measure, but the near kindred of these Polynesians anticipated the hour-glass by boring a small hole in the bottom of a cocoa-nut cup, and placing it in a vessel of water, noting the time it took the cup to sink.

The reader well knows that the primitive folk were good meteorologists. That they knew something about natural thermometers and barometers and hygrometers may be gathered from the story of Gideon's fleece. Mr. Ling Roth contributes the following charming bit from the Malay:—"When the natives of Borneo are selecting the site for a new village a piece of bamboo is stuck in the ground, filled with water and the aperture covered with leaves. A spear and a shield are placed beside it, and the whole is surrounded by a rail. The latter is to protect the bamboo from being upset by wild animals, and the weapons are to warn strangers not to touch it. If there is much evaporation by the morning the place is considered hot and unhealthy, and is abandoned."

The evolution of machinery cannot be ignored in this connection. A machine in this view is a contrivance for changing

the direction and the velocity of motion or force. It cannot create force any more than a tool can. On the contrary, it consumes a vast amount of force in its own working. By means of a tool the entire force exerted is brought to bear upon the material. The machine, by the waste of a portion of the force enables the workman to apply his efforts more rapidly, more powerfully, or in ways unattainable by hand.

All power at first was hand-power, the machinery of the world was moved only by human muscles. In the chapter on animals will be treated the gradual enlistment of domestic beasts in the service of man. Besides these, winds and water currents, vapours and electric currents and chemical force have been domesticated for human uses. The study of these is essential to a knowledge of industrial progress. Muscular power is the basis of all power, just as human backs will be shown later to be the basis of the carrying trade.

The Zuñi or Nicobar woman's simple potter's wheel, which is nothing more than the turning of her vessel about in a dish or basket as the work goes on, is only a little more rude than the fashion in the interior of China of putting a lump of clay on the top of a revolving shaft, which they turn with one hand while the pot is formed with the other.

"The potter's wheel was known in the world from high antiquity. The Egyptian artisan turned the wheel by hand. The Hindu potter goes down to the river-side when a flood has brought him a deposit of fine clay, when all he has to do is to knead a batch of it, stick up his pivot in the ground, balance the heavy wooden table on the top, give it a spin and set to work."

The spindle with its whorl is a free wheel and axle, with the principle of the fly-wheel fully developed, and the twister, well known to savages, is a still simpler fly-wheel. The Zuñi Indians make a block of wood about 8 in. × 3 in. × ½ in. Near one end a hole is made ¾ in. in diameter, and the stick is notched just outside this hole. This is the fly wheel. A stick with a head cut on it is thrust through the hole and serves for handle. One end of the material to be twisted is tied to the notch on the fly-wheel, and the other end to some fixed object. The twister holds

to the handle and causes the fly to revolve by the motion of his hand.

The regular spindle serves for yarn-making, thread-making, and twine-making, and the product is wound on the shaft, which is twirled in a small vessel, rolled along the thigh, or sent spinning in the air, held up by the thread caught in a hook on the upper end. Here the operation stops, and the writer does not know of any primitive people to whom it occurred to fix the two ends of the shaft as journals in bearings. The nearest approach to such a device is the Eskimo drill; in which the piece held in the mouth furnishes the upper socket, the perforation being made the under socket and the bow or strap applying the power. The true wheel and axle reverses this process, and does its work where the Eskimo applies his force.

Crank motion applied to the potter's wheel is of very recent date. Dr. Smith, long resident in Siam, informed the writer that the potter first gives an immense impetus to a fly-wheel, and then works the clay while the wheel is turning. The next progress forward is placing the heavy fly-wheel low down where the potter may keep it in motion with his toes. "So doth the potter, sitting at his work and turning the wheel about with his feet, he fashioneth the clay with his arm."

In polishing the basket lacquer work, the Shans use a crude lathe. A bamboo basket is coated with lac or with lac mixed with ashes of straw. When the lac is dry, the basket is turned on a very simple lathe, the wheel of which revolves backwards and forwards, the principle of the crank being apparently unknown. The workman uses a treadle, which turns the wheel one way, and it is brought back in the opposite direction by a long bamboo which acts as a spring. The reader should compare with this the exceedingly crude Moorish lathe in which the operator works a bow drill in one hand and uses his toes to assist the other hand to holding the cutting tools.

"There are strong grounds," says Shaw, "for considering the fire drill or twirling stick, first revolved between the hands of one or two operators, as one of the earliest examples of machinal motion, and that a long time must have elapsed before the introduction of continuous, instead of alternating rotary motion."

But Mr. Shaw forgets the fly-wheel on the spindle, called usually the whorl. The spinning of fibre is as old as the fire sticks. Indeed, it would not appear that the fire sticks are among the oldest of human devices. Men had fire very long before they knew how to create it.

"It is extremely probable that the first continuous motion was employed in connection with the grinding of corn." Shaw arranges corn-grinders as:—(1) Simple stone pounder; (2) Mortar and pestle, worked (*a*) by slaves, (*b*) by bondsmen, (*c*) by cattle; (3) flat cylindrical stone with vertical spindle. But in reality there have been two series, the mortar series and the grinding series, the order of which last would be (1) rubber and flat nature rock; (2) metate and muller; and (3) the rotary mill driven first by hand and after by animals, winds, and water.

The employment of the wind to separate chaff from grain is an appliance in primitive agriculture or harvestry. The utilisation of the wind in locomotion will be studied in the chapter on primitive transportation. The Indians of the Plains, who dwelt in skin lodges, understood the use of the fly and extra pole on the tent to utilise the wind in creating a draught and drawing the smoke out of the dwelling. The sail is also used in the Arctic regions to aid in driving the sledge over smooth ice. But no savage had any conception of a windmill, or invited the air to participate in doing mechanical work.

If I were permitted to coin a word, I should call all the combined arts that relate to the getting, preserving, and utilising water, hydrotechny; but that would furnish rather a long term for the study of these arts—hydrotechnology—though it is not lacking in euphony. The spring, the well, the city reservoir, and waterworks; the open stream, the canal, the locomotive; the tide wheel, the overshot, the turbine—all of these indicate progress in hydrotechny as related to aliment, to transportation, to irrigation, and to manufactures. The world's progress has followed the water, and water has never been absent from men's minds.

No aborigines, unaided by domestic animals, have displayed so much patience and ingenuity in the storage and conducting of water as the Indians of the arid region of the United States. Throughout the Pueblo region, says Mr. Hodge, works of irriga-

tion abound in the valleys and on the mountain slopes, especially along the drainage of the Gila and the Salado, in Southern Arizona, where the inhabitants engaged in agriculture to a vast extent by this means. The arable tract of the Salado comprises about 450,000 acres, and the ancient inhabitants controlled the watering of at least 250,000 acres. The outlines of 150 miles of ancient main irrigating ditches may be readily traced, some of which meander southward a distance of fourteen miles. In one place the main canal was found to be a ditch within a ditch, the bed being 7 feet deep. The lower section was only 4 feet wide, but the sides broadened in their ascent to a "bench" 3 feet wide on each side of the canal. Remains of balsas were recovered, showing that the transportation of material was also carried on. Remains of flood gates were found by Mr. Cushing, and great reservoirs for storage of water, one example being 200 feet long and 15 feet in depth.

In Mexico and Peru, especially in the latter, this art reached its highest perfection. "Higher up in the Andes irrigation was carried out on a far more extensive scale. Partly by tunnelling through the solid mountains, partly by carrying channels round their sides, the waters of the higher valleys, where the supply was abundant, were made available for the cultivation of others where it was deficient; and in the district between the Central and Western Cordilleras, to the northward and westward of Cuzco, such channels were extensively constructed to irrigate, not only the valleys, but the llama pastures on the mountain sides."

In the evolution of hydrotechny the curious invention of the Bakalahari negroes has a place. The women dig tiny wells in the wet sand. They then fasten a bunch of grass to the end of a reed and bury it in the pit. By means of the reed they suck water into their mouths and discharge it into ostrich shells, using as a guide to the stream a stalk of grass. When twenty or thirty shells have been filled they are placed in a net, carried home and buried in the earth for future use.

The wheel and bucket are in common use through the eastern continent. For lifting water out of shallow wells or sources of supply, a wheel may be used whose diameter is a little more than the vertical distance from the water to the point of discharge

On the rim of the wheel are buckets resembling those in an old-fashioned mill-wheel. The apparatus is worked by a draught animal. But, in more elaborate specimens of the same sort, the machine is set in a running stream, which, working against paddles on the rim, revolves the wheel and lifts the water. The Chinese make an enormous apparatus of this sort, and fasten bamboo buckets diagonally on the outside of the rim. These descending are plunged mouth first under the water, and ascending retain it until they pass the centre of motion, when they discharge into a trough. Thomson speaks of enormous wheels at Hums, on the Orontes, the diameter of some being 80 or 90 feet.

The *nà'urah,* or Persian water-wheel, common throughout Western Asia, consists of a clumsy cog-wheel, fitted to an upright post, and made to revolve horizontally by a beast attached to a sweep. This turns a similar one perpendicular at the end of a heavy beam, which has a large wide drum built into it, directly over the mouth of the well. Over this drum revolve two rough hawsers, or thick ropes, made of twigs and branches twisted together, and upon them are fastened small jars or wooden buckets. One side descends as the other rises, carrying the small buckets with them, those descending empty, those ascending full. As they pass over the top they discharge into a trough. The buckets are fastened to the hawsers about 2 feet apart. The hawser is made of twigs, generally of myrtle, because it is cheap, easily plaited, and its extreme roughness prevents its slipping on the drum.

In matters of engineering the starting-point backward is itself in a remote past. Watkins, in his "Beginnings of Engineering" says: "Of the races to be considered I will mention in what seems to me to be their order of importance, Chaldea, Babylon, Egypt, Assyria, Phœnicia, Etruria, Palestine, Moab, Persia, India, China, and the Incas. To this aggregate every form of engineering was known which did not require the application of the generated forces. They built canals for transport and irrigation, reservoirs and aqueducts, docks, harbours, and lighthouses. They erected bridges of wood and stone, as well as suspension bridges; laid out roads, cut tunnels, constructed viaducts, planned roofs

for their massive buildings; tested the strength and discovered the weakness of their building materials; instituted elaborate systems of drainage; planned fortifications; designed engines of attack and floating bridges; devised methods for the transport of heavy objects—in fact, covered to a greater or less degree all departments of hydraulic, bridge and road, sanitary, military, and mechanical engineering."

Assuredly even these enterprises were the mature results of still earlier efforts, which it would be delightful to trace. In the earliest engineering feats two facts must be sharply kept before the mind, to wit, that time was no object, and that there were no private buildings. Suppose that every labouring person in London should be immediately withdrawn from all private work, and that they all should be organised to labour for ten years upon some government building as a memorial of the reign of Her Gracious Majesty. One million hand labourers would erect a pyramid containing fifteen thousand milliards of tons of earth, and the mechanics would put on the top of it a structure larger than all the monuments in Egypt combined.

The only puzzle the modern student can have is to conceive how the ancient engineer made and moved his crib work. It is within the ability of a company of savage Indians to hammer down any great stone into any form. It is customary for them as a tribe to all engage in the same operation in hauling logs, or seines, or boats, or stones. The problem is somewhat like that of Archimedes, "Given a rope long enough, and a crib-work strong enough," and any modern savage people will undertake to set up the monuments of Brittany.

"The usual method of removing the iron open rings worn on the ankles by the Madi requires a number of men. A rope is fastened to each side of the ring, upon which a number of men haul in opposite directions until they have opened the joint sufficiently to detach the leg." In pictures of Egyptian stoneworkers great companies of men are seen hauling together on some heavily-weighted sledge, and in Constantinople one may see any number of men from eight to twelve carrying a heavy tierce of wine in slings attached to four parallel bars.

The Khasi Hill tribes of India still erect megalithic monu-

ments. The slabs of sandstone are quarried near by where they are to be set up by means of wedges. Some of these weigh twenty tons. They are moved on a cradle made of strong curved limbs of trees, roughly smoothed and rounded, so as to present little surface to friction. In dragging and setting up the slabs all the members of a community are under an obligation to assist on such an occasion, and are not paid for their labour, beyond receiving in the evening a little food or liquor at the dwelling of the family who sought the aid. This is exactly like the "barn-raisings" familiar to all American farmers.

"The block" (of stone) "is detached by means of wedges introduced into natural fissures and artificially drilled holes. Two or three stout logs are placed under the slab at right angles to its axis and equi-distant. Under these are fastened four bamboo trunks, two on either side parallel to the axis of the stone, and beneath these bamboos series of smaller bamboos like the rounds of a ladder. The whole forms a gigantic crib-work, or carrying frame. Three or four hundred men can unite their efforts thus in picking up the whole and carrying it to its destination. In two or three hours the stone may be transported a mile. It is set up by means of guy ropes and lifting, and planted in a hole previously prepared."

A curious fact in engineering is recorded by that most careful of observers, Rev. J. O. Dorsey, regarding the Omaha tribal circles. He says, "The circle was not made by measurement, nor did any one give directions where each tent should be placed; that was left to the women" (§ 9). "Though they did not measure the distance each woman knew where to pitch her tent." She also knew the proper distances apart for safety, on the one hand, or for the convenience of dressing hides on the other (§ 11). . . . .—O. T. Mason, *Origins of Invention,* 33–82 (Charles Scribner's Sons, 1895).

PRIMITIVE WARFARE

It . . . . appears desirable that, before entering upon that branch of the subject which relates to the *progress* and *development* of the art of war, I should point out briefly the analogies which exist between the weapons, tactics, and stratagems of

savages and those of the lower creation, and show to what extent man appears to have availed himself of the weapons of animals for his own defence.

In so doing the subject may be classified as follows:—

CLASSIFICATION OF THE WEAPONS OF ANIMALS AND SAVAGES

Defensive.	Offensive.	Stratagems.
Hides.	Piercing.	Flight.
Solid plates.	Striking.	Concealment.
Jointed plates.	Serrated.	Tactics.
Scales.	Poisoned.	Columns.
	Missiles.	Leaders.
		Outposts.
		Artificial defences.
		War cries. . . . .

This, however, leads to another subject, viz. the causes of war amongst primitive races, which is deserving of separate treatment. . . . .

DEFENSIVE WEAPONS

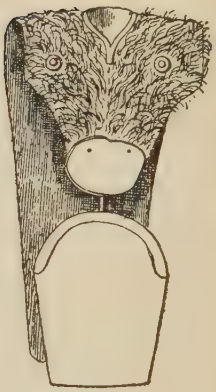
We may pass briefly over the defensive weapons of animals and savages, not by any means from the analogy being less perfect in this class of weapons, but rather because the similarity is too obvious to make it necessary that much stress should be laid on their resemblance.

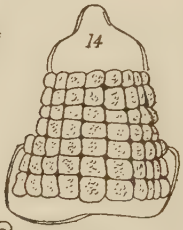
Hides.—The thick hides of pachydermatous animals correspond to the quilted armour of ancient and semi-civilized races. Some animals, like the rhinoceros and hippopotamus, are entirely armed in this way; others have their defences on the most vulnerable part, as the mane of the lion, and the shoulder pad of the boar. The skin of the tiger is of so tough and yielding a nature, as to resist the horn of the buffalo when driven with full force against its sides. The condor of Peru has such a thick coating of feathers, that eight or ten bullets may strike without piercing it.

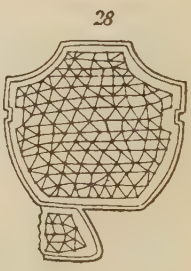
According to Thucydides, the Locrians and Acarnanians, being professed thieves and robbers, were the first to clothe themselves in armour. But as a general rule it may be said, that the opinions of ancient writers upon the origin of the customs with which they were familiar, are of little value in our days. There

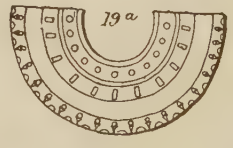
is, however, evidence to show that the use of defensive armour is not usual amongst savages in the lowest stages of culture. It is not employed, properly speaking, by the Australians, the Bushmen, the Fuegians, or in the Fiji or Sandwich Islands. But in other parts of the world, soon after men began to clothe themselves in the skins of beasts, they appear to have used the thicker hides of animals for purposes of defence. When the Esquimaux apprehends hostility, he takes off his ordinary shirt, and puts on a deer's skin, tanned in such a manner as to render it thick for defence, and over this he again draws his ordinary shirt, which is also of deer-skin, but thinner in substance. The Esquimaux also use armour of eider drake's skin. The Abipones and Indians of the Grand Chako arm themselves with a cuirass, greaves, and helmet, composed of the thick hide of the tapir, but they no longer use it against the musketry of the Europeans. The Yucanas also use shields of the same material. The war-dress of a Patagonian chief . . . . is exhibited (Figs. 11, 12); it is composed of seven thicknesses of hide, probably of the horse, upon the body, and three on the sleeves. The chiefs of the Musgu negroes of Central Africa use for defence a strong doublet of the same kind, made of buffalo's hide with the hair inside. The Kayans of Borneo use hide for their war-dress, as shown by a specimen . . . . (Fig. 13). The skin of the bear and panther is most esteemed for this purpose. The inhabitants of Pulo Nias, an island off the western coast of Sumatra, use for armour a 'baju' made of leather. In some parts of Egypt a breastplate was made of the back of the crocodile (Fig. 14). In the island of Cayenne, in 1519, the inhabitants used a breastplate of buffalo's hide. The Lesghi of Tartary wore armour of hog's skin. The Indians of Chili, in the seventeenth century, wore corselets, back and breast plates, gauntlets, and helmets of leather, so hardened, that it is described by Ovalle as being equal to metal. According to Strabo, the German Rhoxolani wore helmets, and breastplates of bull's hide, though the Germans generally placed little reliance in defensive armour. The Ethiopians used the skins of cranes and ostriches for their armour.

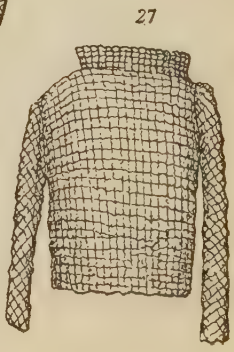
We learn from Herodotus that it was from the Libyans the Greeks derived the apparel and aegis of Minerva, as represented







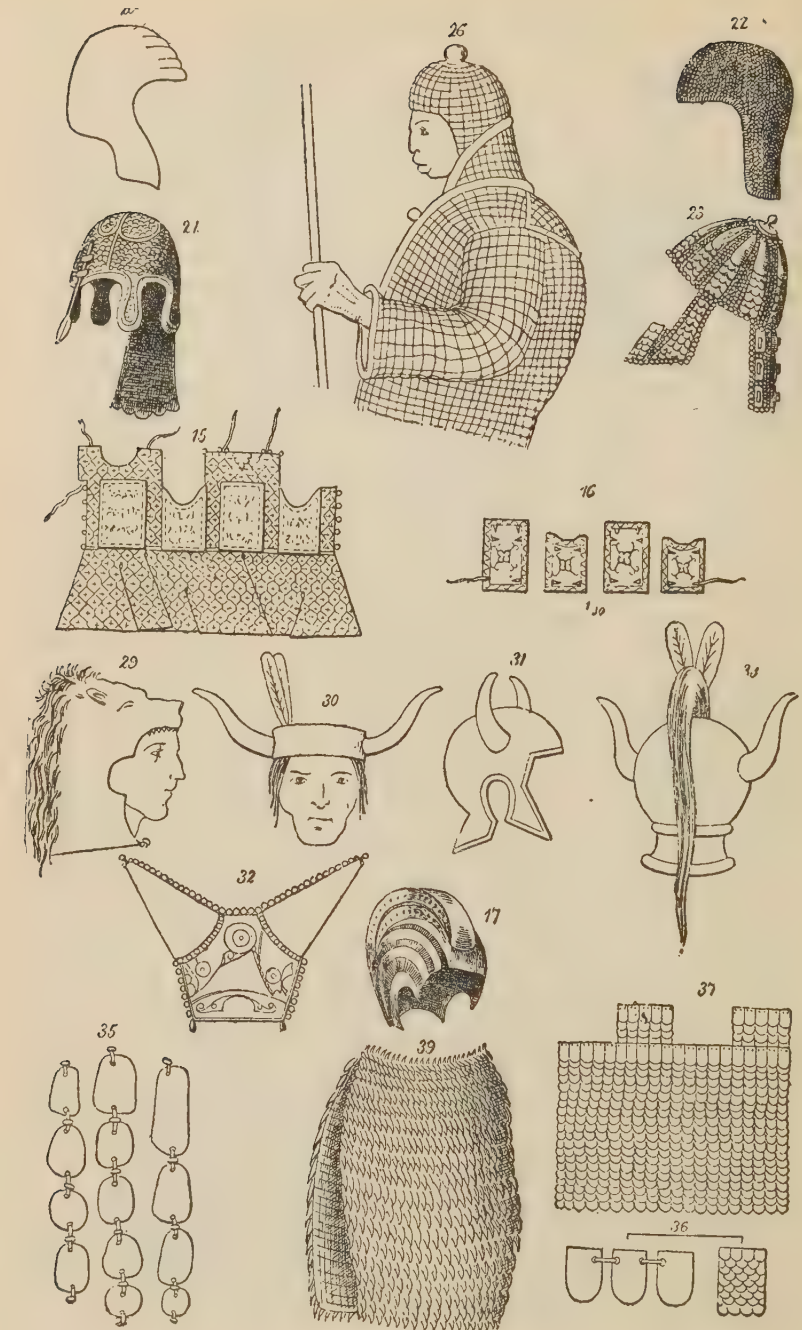




A Lone Fec. del.

upon her images, but instead of a pectoral of scale armour, that of the Libyans was merely of skin. According to Smith's *Dict. of Gr. and Roman Antiquities* (s.v. *lorica*), the Greek 'thorax,' called στάδιος, from its standing erect by its own stiffness, was originally of leather, before it was constructed of metal. In Meyrick's *Ancient Armour* there is the figure of a suit, supposed formerly to have belonged to the Rajah of Guzerat (Fig. 15). The body part of this suit is composed of four pieces of rhinoceros hide, showing that, in all probability, this was the material originally employed for that particular class of armour, which is now produced of the same form in metal, a specimen of which, ... taken from the Sikhs, is now exhibited (Fig. 16).

In more advanced communities, as skins began to be replaced by woven materials, quilted armour supplied the place of hides. In those parts of the Polynesian Islands in which armour is used, owing probably to the absence of suitable skins, woven armour appears to have been employed in a comparatively low state of society. Specimens of this class of armour from the Museum of the Institution are exhibited; they are from the Kingsmill Islands, Pleasant Island, and the Sandwich Islands. A helmet from the latter place (Fig. 17) much resembles the Grecian in form, while the under tippet, from Pleasant Island (Fig. 18), may be compared to the pectoral of the Egyptians (Fig. 19, *a* and *b*), which, as well as the head-dress (Fig. 20), was of a thickly quilted material. The Egyptians wore this pectoral up to the time of Xerxes, who employed their sailors, armed in this way, during his expedition into Greece. Herodotus says that the Indians of Asia wore a thorax of rush matting. In 1514, Magellan found tunics of quilted cotton, called 'laudes,' in use by the Muslims of Guzerat and the Deccan. An Indian helmet of this description from my collection (Fig. 21) is exhibited; in form it resembles the Egyptian, and an Ethiopian one (Fig. 22), composed of beads of the same form, brought from Central Africa by Consul Petherick, is exhibited. Fig. 23 shows that the same form, in India, was subsequently produced in metal. A suit of quilted armour formerly belonging to Koer Singh, and lately presented to the Institution by Sir Vincent Eyre, is also exhibited (Fig. 24). The body armour and helmet


20
26
22
21
23
15
16
30
29
30
31
33
32
17
37
35
39
36

found upon Tippoo Sahib at his death, which are now in the Museum of the Institution (Fig. 25, *a*, *b*, and *c*), were thickly quilted. Upon the breast, this armour consists of two sheets of parchment, and nine thicknesses of padding composed of cocoons of the *Saturnia mylitta*, stuffed with the wool of the *Eriodendron anfractuosum, D.C.*, neatly sewn together, as represented in Fig. 25 *b*. The Aztecs and Peruvians also guarded themselves with a wadded cotton doublet. Quilted armour or thick linen corselets were used by the Persians, Phoenicians, Chalybes, Assyrians, Lusitanians, and Scythians, by the Greeks, and occasionally by the Romans. By the Persians it was used much later; and in Africa to this day, quilted armour, of precisely the same description, is used both for men and horses by the Bornouese of Central Africa, and is described by Denham and Clapperton (Fig. 26). Fig. 27 is a suit of armour . . . . from the Navigator Islands, composed of coco-nut fibre coarsely netted. Fig. 28 is part of a Chinese jacket of sky-blue cotton, quilted with enclosed plates of iron; it is precisely similar to the 'brigandine jacket' used in Europe in the sixteenth century, which was composed of 'small plates of iron quilted within some stuff,' and 'covered generally with sky-blue cloth.' This class of armour may be regarded as a link connecting the quilted with the scale armour, to be described hereafter.

As a material for shields, the hides of animals were employed even more universally, and up to a later stage of civilization. In North America the majority of the wild tribes use shields of the thickest parts of the hides of the buffalo. In the New Hebrides the skin of the alligator is used for this purpose, as appears by a specimen belonging to the Institution. In Africa the Fans of the Gaboon employ the hide of the elephant for their large, rectangular shields. The Wadi, the Wagogo, and the Abyssinians in East Africa, have shields of buffalo's hide, or some kind of leather, like the Ethiopians of the time of Herodotus. The ox-hide shields of the Greeks are mentioned in Homer's *Iliad;* that of Ajax was composed of seven hides with a coating of brass on the outside. The spear of Hector is described as piercing six of the hides and the brass coating, remaining fixed in the seventh hide. The Kaffirs, Bechuanas, Basutos, and others in South

Africa, use the hide of the ox. The Kelgeres, Kelowi, and Tawarek, of Central Africa, employ the hide of the Leucoryx antelope. Shields of the rhinoceros hide, from Nubia, and of the ox, from Fernando Po, are exhibited. In Asia the Biluchi carry shields of the rhinoceros horn, and the same material is also used in East Africa. A specimen from Zanzibar is in the Institution. In the greater part of India the shields are made of rhinoceros and buffalo's hide, boiled in oil, until they sometimes become transparent, and are proof against the edge of a sabre.

In a higher state of civilization, as the facilities for constructing shields of improved materials increased, the skins of animals were still used to cover the outside. Thus the negroes of the Gold Coast made their shields of osier covered with leather. That of the Kanembu of Central Africa is of wood covered with leather, and very much resembles in form that of the Egyptians, which, as we learn from Meyrick and others, was also covered with leather, having the hair on the outside like the shields of the Greeks. The Roman 'scutum' was of wood covered with linen and sheepskin. According to the author of *Horae Ferales,* the Saxon shield was of wood covered with leather; the same applies to the Scotch target, and leather was used as a covering for shields as late as the time of Henry VIII.

Head crests.—The origin of the hairy crests of our helmets is clearly traceable to the custom of wearing for head-dresses the heads and hair of animals. The Asiatic Ethiopians used as a head-covering, the skin of a horse's head, stripped from the carcase together with the ears and mane, and so contrived, that the mane served for a crest, while the ears appeared erect upon the head (Hdt. vii. 70). In the coins representing Hercules, he appears wearing a lion's skin upon the head. These skins were worn in such a manner that the teeth appeared grinning at the enemy over the head of the wearer (as represented in Fig. 29, which is taken from a bronze in the Blacas collection), a custom which seems also to have prevailed in Mexico. Similar head-dresses are worn by the soldiers on Trajan's Column. The horns worn on the heads of some of the North American Indians (Fig. 30), and in some parts of Africa, are no doubt derived from this practice of wearing on the head the skins of animals with their

appendages. The helmet of Pyrrhus, King of Epirus, was surmounted by two goat's horns. Horns were afterwards represented in brass, on the helmets of the Thracians (Fig. 31), the Belgic Gauls, and others. Fig. 32 is an ancient British helmet of bronze lately found in the Thames, surmounted by straight horns of the same material. Horned helmets are figured on the ancient vases. Fig. 33 is a Greek helmet having horns of brass, and traces of the same custom may still be observed in heraldry.

The practice of wearing head-dresses of feathers, to distinguish the chiefs from the rank and file, is universal in all parts of the world, and in nearly every stage of civilization. Amongst the North American Indians the feathers are cut in a particular manner to denote the rank of the wearer, precisely in the same manner that the long feathers of our general officers distinguish them from those wearing shorter feathers in subordinate ranks. This custom, Mr. Schoolcraft observes, when describing the head-dresses of the American Indians, may very probably be derived from the feathered creation, in which the males, in most of the cock, turkey, and pheasant tribes, are crowned with bright crests and ornaments of feathers.

Solid plates.—It has often struck me as remarkable that the shells of the tortoise and turtle, which are so widely distributed and so easily captured, and which would appear to furnish shields ready made to the hand of man, should seldom, if ever, in so far as I have been able to learn, be used by savages for that purpose. This may, however, be accounted for by the fact that *broad* shields of that particular form, though common in more advanced civilizations, are never found in the hands of savages, at least in those localities in which the turtle, or large tortoise, is available.

It will be seen subsequently, in tracing the history of the shield, that in the rudest condition of savage life, this weapon of defence has a history of its own; that both in Africa and Australia it is derived by successive stages from the stick or club, and that the broad shield does not appear to have been developed until after mankind had acquired sufficient constructive skill to have been able to form shields of lighter and more suitable materials than is afforded by the shell of the turtle. It is, however, evident that in later times the analogy was not lost sight of,

as the word 'testudo' is a name given by the Romans to several engines of war having shields attached to them, and especially to that particular formation of the legionary troops, in which they approached a fortified building with their shields joined together, and overlapping, like the scaly shell of the imbricated turtle, which is a native of the Mediterranean and Asiatic seas.

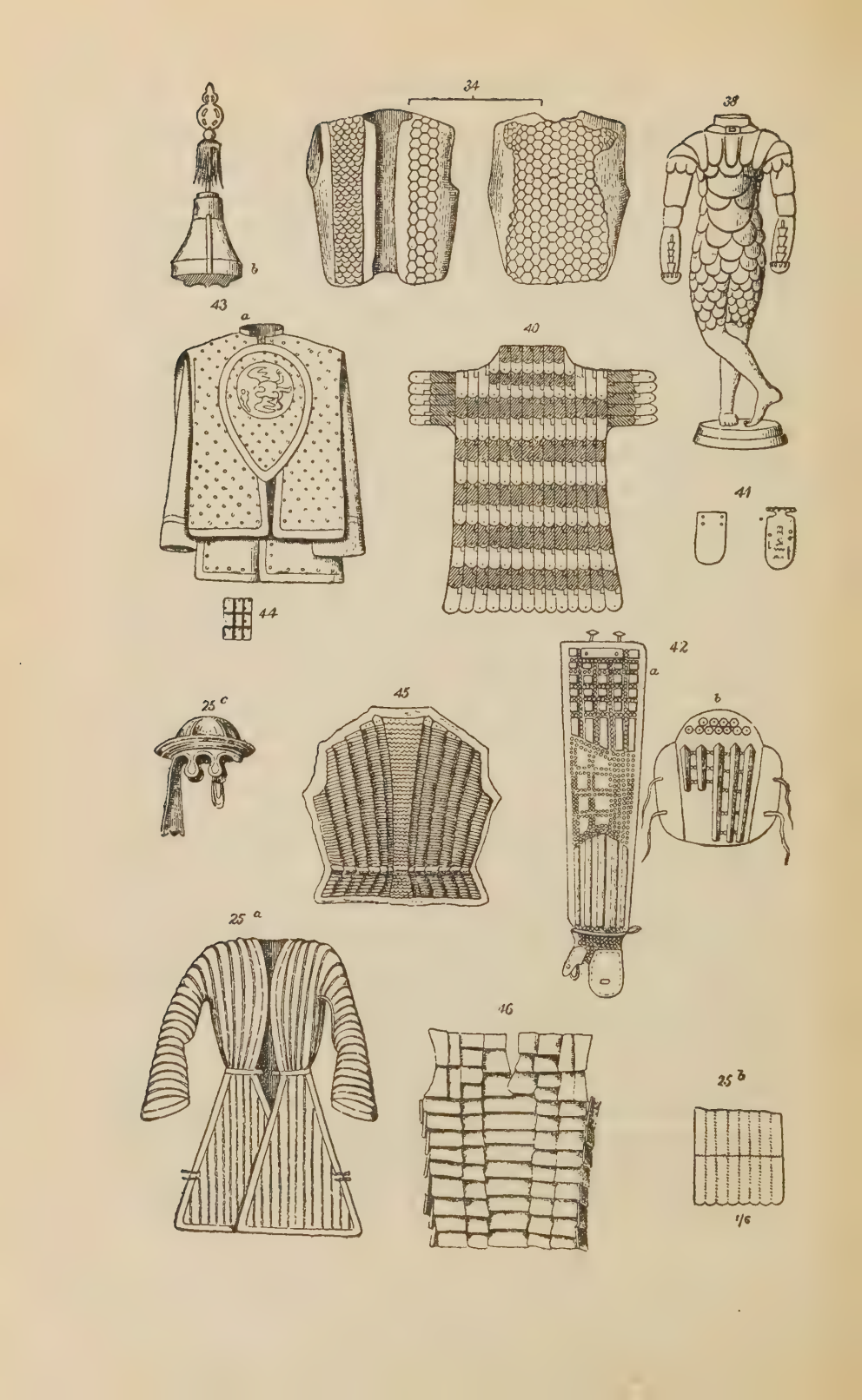
Jointed plates.—In speaking of the jointed plates, so common to all the crustacea, it is sufficient to notice that this class of defence in the animal kingdom, may be regarded as the prototype of that peculiar form of armour which was used by the Romans, and to which the French, at the commencement of the seventeenth century, gave the name of 'écrevisse,' from its resemblance to the shell of a lobster. The fluted armour, common in Persia, and in the middle ages of Europe, is also constructed in exact imitation of the corrugated shell defences of a large class of the Mollusca.

Scale armour.—That scale armour derived its origin from the scales of animals, there can be little doubt. It has been stated on the authority of Arrian (*Tact.* 13. 14), that the Greeks distinguished scale armour by the term λεπιδωτός, expressive of its resemblance to the scales of fish; whilst the jointed armour, composed of long flexible bands, like the armour of the Roman soldier, and the 'écrevisse' of the middle ages, was called φολιδωτός from its resemblance to the scales of serpents. The brute origin of scale armour is well illustrated by the breastplate of the Bugo Dyaks, a specimen of which . . . . is represented in Fig. 34. The process of its construction was described in a notice attached to a specimen of this armour in the Exhibition of 1862. The scales of the Pangolin are collected by the Bugis as they are thrown off by the animal, and are stitched on to bark with small threads of cane, so as to overlap each other in the same manner that they are arranged on the skin of the animal. When the front piece is completely covered with scales, a hole is cut in the bark for the head of the wearer. The specimen now exhibited appears, however, to be composed of the entire skin of the animal. Captain Grant, in his *Walk across Africa,* mentions that the scales of the armadillo are in like manner collected by the negroes of East Africa, and worn in a belt 'three inches across,' as a charm.

It is reasonable to suppose that the use of scale armour, in most countries, originated in this manner by sewing on to the quilted armour before described, fragments of any hard material calculated to give it additional strength. Fig. 35 is a piece of bark from Tahiti, studded with pieces of coco-nut stitched on. The Sarmatians and Quadi are described by Ammianus Marcellinus as being protected by a 'lorica,' composed of pieces of horn, planed and polished, and fastened like feathers upon a linen shirt. Pausanias also, who is confirmed by Tacitus, says that the Sarmatians had large herds of horses, that they collected the hoofs, and after preparing them for the purpose, sewed them together, with the nerves and sinews of the same animal, so as to overlap each other like the surface of a fir cone, and he adds, that the 'lorica' thus formed was not inferior to that of the Greeks either in strength or elegance. The Emperor Domitian had, after this model, a cuirass of boar's hoofs stitched together. Fig. 36 represents a fragment of scale armour made of horn, found at Pompeii. A very similar piece of armour (Fig. 37), from some part of Asia, said to be from Japan, but the actual locality of which is not known, is figured in Meyrick's *Ancient Armour,* pl. iii. 1. It is made of the hoofs of some animal, stitched and fastened so as to hold together without the aid of a linen corselet. An ancient stone figure (Fig. 38), having an inscription in a character cognate to the Greek, but in an unknown language, and covered with armour of this description, is represented in the third volume of the *Journal of the Archaeological Association.* The Kayans, inhabiting the eastern coast of Borneo, form a kind of armour composed of little shells placed one overlapping the other, like scales, and having a large mother-of-pearl shell at the end. This last portion of the armour is shown in the figure of the Kayan war-dress already referred to (Fig. 13). Fig. 39 is a back- and breast-piece of armour from the Sandwich Islands, composed of seal's teeth, set like scales, and united with string.

Similar scales would afterwards be constructed in bronze and iron. It was thus employed by the Egyptians (Fig. 40), two scales of which are shown in Fig. 41; also by the Persians, Assyrians, Philistines, Dacians, and most ancient nations.

The armour of Goliath is believed to have been of scales, from


34
38
43
a
40
41
44
42
a
25 c
45
b
25 a
46
25 b
1/6

the fact of the word 'kaskassim,' used in the text of 1 Sam. xvii, being the same employed in Leviticus and Ezekiel, to express the scales of fish. Amongst the Romans, scale armour was regarded as characteristic of barbarians, but they appear to have adopted it in the time of the Emperors. A suit of Japanese armour in my collection shows four distinct systems of defence, the back and breast being of solid plates, the sleeves and leggings composed of small pieces of iron, stitched on to cloth, and united with chain, whilst other portions are quilted with enclosed pieces of iron (Fig. 42, *a* and *b*). Fig. 43 *a* and *b*, is a suit of Chinese armour, in the Museum, having large iron scales on the inside (Fig. 44). This system was also employed in Europe. Fig. 45 is the inner side of a suit of 'jazerine' armour of the fifteenth or sixteenth century, in my collection. Fig. 46 represents a similar suit in the Museum of the Institution, probably of the same date, having large scales of iron on the outside. A last vestige of scale armour may be seen in the dress of the Albanians, which, like the Scotch and ancient Irish kilt, and that formerly worn by the Maltese peasantry, is a relic of costume of the Greek and Roman age. In the Albanian jacket the scales are still represented in gold embroidery.

OFFENSIVE WEAPONS OF MEN AND ANIMALS

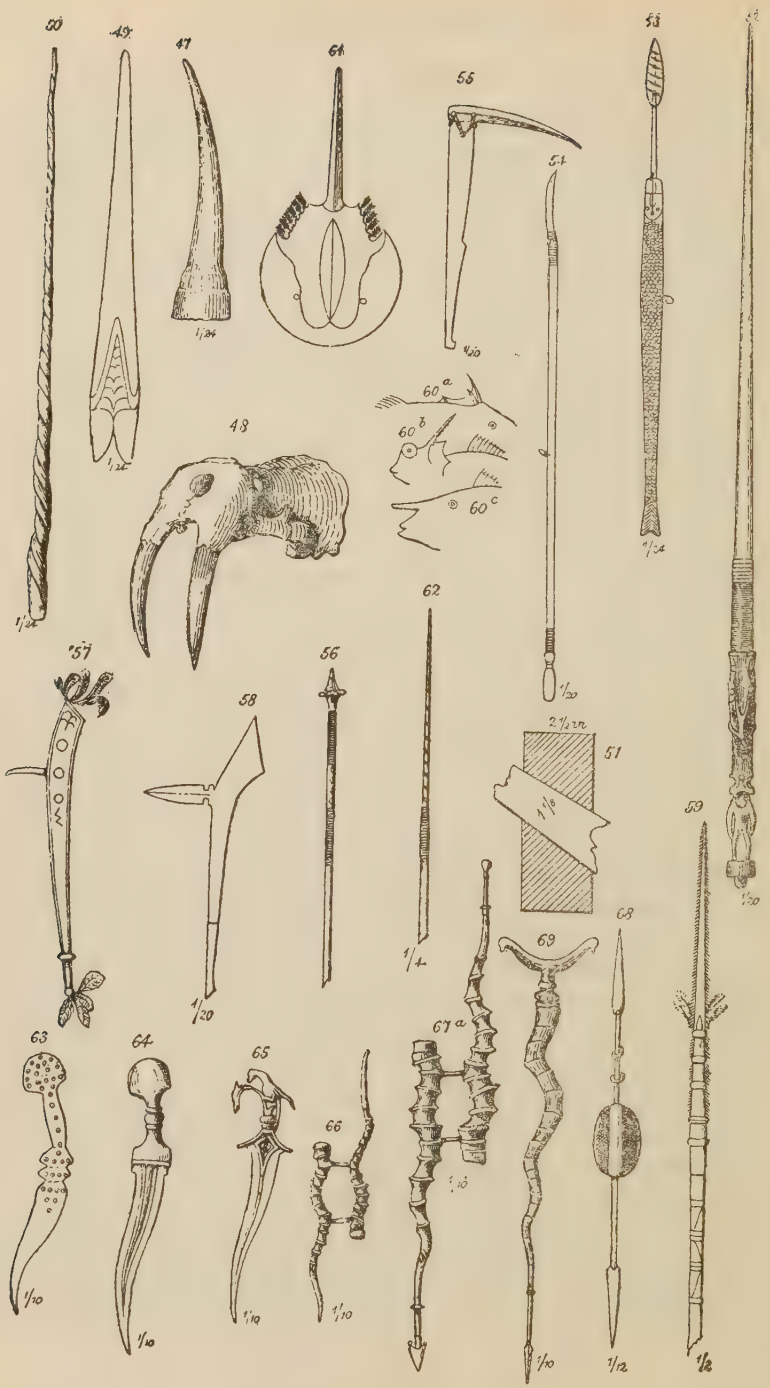
Piercing weapons.—The Gnu of South Africa, when pressed, will attack men, bending its head downwards, so as to pierce with the point of its horn. The same applies to many of the antelope tribe. The rhinoceros destroys the elephant with the thrust of its horn, ripping up the belly (Fig. 47). The horn rests on a strong arch formed by the nasal bones; those of the African rhinoceros, two in number, are fixed to the nose by a strong apparatus of muscles and tendons, so that they are loose when the animal is in a quiescent state, but become firm and immovable when he is enraged, showing in an especial manner that this apparatus is destined for warlike purposes. It is capable of piercing the ribs of a horse, passing through saddle, padding, and all. Mr. Atkinson, in his Siberian travels, speaks of the tusk of the wild boar, which in those parts is long, and as sharp as a knife, and he describes the death of a horse which was killed by a single stroke from this animal, delivered in the chest. The

buffalo charges at full speed with its horn down. The bittern, with its beak, aims always at the eye. The walrus (Fig. 48) attacks fiercely with its pointed tusks, and will attempt to pierce the side of a boat with them. The needle-fish of the Amazons is armed with a long pointed lance. The same applies to the sword-fish of the Mediterranean and Atlantic (Fig. 49), which, notwithstanding its food is mostly vegetable, attacks the whale with its spear-point on all occasions of meeting. There is an instance on record, of a man, whilst bathing in the Severn near Worcester, having been killed by the sword-fish. . . . .

The narwhal has a still more formidable weapon of the same kind (Fig. 50). It attacks the whale, and occasionally the bottoms of ships, a specimen of the effect of which attack, from the Museum of the Institution, is represented in Fig. 51. The Esquimaux, who, in the accounts which they give of their own customs, profess to derive much experience from the habits of the animals amongst which they live, use the narwhal's tusk for the points of their spears. Fig. 52 represents a 'nuguit' from Greenland, of the form mentioned by Cranz; it is armed with the point of the narwhal's tusk. Fig. 53, from my collection, has the shaft also of narwhal's tusk; it is armed with a metal blade, but it is introduced here in order to show the association which existed in the mind of the constructor between his weapon and the animal from which the shaft is derived, and for the capture of which it is chiefly used. The wooden shaft, it will be seen, is constructed in the form of the fish, and the ivory fore-shaft is inserted in the snout in the exact position of that of the fish itself. At Kotzebue Sound, Captain Beechey found the natives armed with lances composed of a walrus tooth fixed to the end of a wooden staff (Fig. 54). They also employ the walrus tooth for the points of their tomahawks (Fig. 55). The horns of the antelope are used as lance-points by the Djibba negroes of Central Africa, as already mentioned (p. 52), and in Nubia also by the Shillooks and Dinkas. The antelope's horn is also used in South Africa for the same purpose. The argus pheasant of India, the wing-wader of Australia, and the plover of Central Africa, have spurs on their wings, with which they fight; the cock and turkey have spurs on their feet, used expressly

for offence. The white crane of America has been known to drive its beak deep into the bowels of a hunter. The Indians of Virginia, in 1606, are described as having arrows armed with the spurs of the turkey and beaks of birds. In the Christy collection there is an arrow, supposed to be from South America, which is armed with the natural point of the deer's horn (Fig. 56). The war-club of the Iroquois, called GA-NE-U'-GA-O-DUS-HA, or 'deer-horn war-club,' was armed with a point of the deer's horn (Fig. 57), about 4 inches in length; since communication with Europeans, a metal point has been substituted (Fig. 58). It appears highly probable that the 'martel-de-fer' of the fifteenth and sixteenth centuries, which is also used in India and Persia, may have been derived, as its form indicates, from a horn weapon of this kind. Horn points suitable for arming such weapons have been found both in England and Ireland, two specimens of which are in my collection. The weapon of the sting-ray, from the method of using it by the animal itself, should more properly be classed with serrated weapons, but it is a weapon in general use amongst savages for spear or arrow points (Fig. 59), for which it has the particular merit of breaking off in the wound. It causes a frightful wound, and being sharply serrated, as well as pointed, there is no means of cutting it out. It is used in this way by the inhabitants of Gambier Island, Samoa, Otaheite, the Fiji Islands, Pellew Islands, and many of the Low Islands. Amongst the savages of tropical South America, the blade of the ray, probably the *Trygon histrix*, is used for arrow-points.

In the *Balistes capriscus* (Fig. 60 *a*), a rare British fish, the anterior dorsal is preceded by a strong erectile spine, which is used for piercing other fishes from beneath. Its base is expanded and perforated, and a bolt from the supporting plate passes freely through it. When this spine is raised, a hollow at the back receives a prominence from the next bony ray, which fixes the spine in an erect position, as the hammer of a gun-lock acts at full-cock, and the spine cannot be forced down till this prominence is withdrawn, as by pulling the trigger. This mechanism may be compared to the fixing and unfixing of a bayonet; when the spine is unfixed and bent down, it is received into a groove on the supporting plate, and offers no impediment to the progress


50
49
47
64
55
54
53
60a
60b
60c
48
62
57
56
58
51
59
63
64
65
66
67a
69
68

of the fish through the water. These fishes are also found in a fossil state, and, to use the words of Professor Owen, from whose work this description of the *Balistes* is borrowed, exemplify in a remarkable manner the efficacy, beauty, and variety of the ancient armoury of that order. The stickleback is armed in a similar manner, and is exceedingly pugnacious. The *Cottus diceraus, Pall.* (Fig. 60 *b*), has a multi-barbed horn on its back, exactly resembling the spears of the Esquimaux, South American, and Australian savages. The *Naseus fronticornis, Lac.* (Fig. 60 *c*), has also a spear-formed weapon. The Yellow-bellied Acanthurus is armed with a spine of considerable length upon its tail.

The Australians of King George's Sound use the pointed fin of the roach to arm their spears; the inhabitants of New Guinea also arm their arrows with the offensive horn of the saw-fish, and with the claw of the cassowary. The sword of the Limulus, or king-crab, is an offensive weapon; its habits do not appear to be well understood, but its weapon is used in some of the Malay islands for arrow-points (Fig. 61). The natives of San Salvador, when discovered by Columbus, used lances pointed with the teeth of fish. The spine of the Diodon is also used for arrow-points (Fig. 62). Amongst other piercing weapons suggested by the horns of animals may be noticed the Indian 'kandjar' composed of one side of the horn of the buffalo, having the natural form and point (Fig. 63). In later times a metal dagger, with ivory handle, was constructed in the same country (Fig. 64), after the exact model of the one of horn, the handle having one side flat, in imitation of the half-split horn, though of course that peculiar form was no longer necessitated by the material then used. The same form of weapon was afterwards used with a metal handle (Fig. 65). The sharp horns of the 'sasin,' or common antelope, often steel pointed, are still used as offensive weapons in India (Figs. 66, 67, 68). . . . . Three stages of this weapon are exhibited, the first having the natural point, the second a metal point, and the third a weapon of nearly the same form composed entirely of metal. The Fakirs and Dervishes, not being permitted by their profession to carry arms, use the pointed horn of the antelope for this purpose. Fig. 69 is a specimen from my collec-

tion; from its resemblance to the Dervishes' crutch of Western Asia, I presume it can be none other than the one referred to in the *Journal of the Archaeological Association,* from which I obtained this information respecting the Dervishes' weapon. Mankind would also early derive instruction from the sharp thorns of trees, with which he must come in contact in his rambles through the forests; the African mimosa, the Gledischia, the American aloe, and the spines of certain palms, would afford him practical experience of their efficacy as piercing weapons, and accordingly we find them often used by savages in barbing their arrows.

Striking weapons.—Many animals defend themselves by blows delivered with their wings or legs; the giraffe kicks like a horse as well as strikes sideways with its blunt horns; the camel strikes with its fore legs and kicks with its hind legs; the elephant strikes with its proboscis and tramples with its feet; eagles, swans, and other birds strike with their wings; the swan is said to do so with sufficient force to break a man's leg; the cassowary strikes forward with its feet; the tiger strikes a fatal blow with its paw; the whale strikes with its tail, and rams with such force, that the American whaler *Essex* is said to have been sunk by that animal. There is no known example of mankind in so low a state as to be unacquainted with the use of artificial weapons. The practice of boxing with the fist, however, is by no means confined to the British Isles as some people seem to suppose, for besides the Romans, Lusitanians, and others mentioned in classical history, it prevailed certainly in the Polynesian islands and in Central Africa.

Serrated weapons.—This class of weapons in animals corresponds to the cutting weapons of men. Amongst the most barbarous races, however, as amongst animals, no example of a cutting weapon is found: although the Polynesian islanders make very good knives of the split and sharpened edges of bamboo, and the Esquimaux, also, use the split tusk of the walrus as a knife, these cannot be regarded, nor, indeed, are they used, as edged weapons. These, strictly speaking, are confined to the metal age, and their place, in the earliest stages of civilization, is supplied by weapons with serrated, or saw-like edges.

Perhaps the nearest approach in the animal kingdom to an edged weapon is the fore-arm of the mantis, a kind of cricket, used by the Chinese and others in the East for their amusement. Their combats have been compared to that of two soldiers fighting with sabres. They cut and parry with their fore-arms, and, sometimes, a single stroke with these is sufficient to decapitate, or cut in two the body of an antagonist. But on closer inspection, these fore-arms are found to be set with a row of strong and sharp spines, similar to those of all other animals that are provided with this class of weapon. The snout of the saw-fish is another example of the serrated weapon. Its mode of attacking the whale is by jumping up high in the air, and falling on the animal, not with the point, but with the sides of its formidable weapon, both edges of which are armed with a row of sharp horns, set like teeth, by means of which it rasps a severe cut in the flesh of the whale. The design in this case is precisely analogous to that of the Australian savage, who throws his similarly constructed spear so as to strike, not with the bone point, but with its more formidable edges, which are thick set with a row of sharp-pointed pieces of obsidian, or rock-crystal. The saw-fish is amongst the most widely distributed of fishes, belonging to the arctic, antarctic, and tropical seas. It may, therefore, very possibly have served as a model in many of the numerous localities in which this character of weapon is found in the hands of savages. The snout itself is used as a weapon by the inhabitants of New Guinea, the base being cut and bound round so as to form a handle. Fig. 70 is a specimen from the Museum of the Institution. The weapon of the sting-ray, though used by savages for spear-points, more properly belongs to this class, as the mode of its employment by the animal itself consists in twisting its long, slender tail round the object of attack, and cutting the surface with its serrated edge. The teeth of all animals, including those of man himself, also furnish examples of serrated weapons.

When we find models of this class of weapon so widely distributed in the lower creation, it is not surprising that the first efforts of mankind in the construction of trenchant implements, should so universally consist of teeth or flint flakes, arranged

along the edges of staves or clubs, in exact imitation of the examples which he finds ready to his hand, in the mouths of the animals which he captures, and on which he is dependent for his food. Several specimens of implements, edged in this manner with sharks' teeth . . . . are represented in Figs. 71, 72, 73, 74. They are found chiefly in the Marquesas, in Tahiti, Depeyster's Island, Byron's Isles, the Kingsmill Group, Radak Island, and the Sandwich Islands, also in New Zealand (Fig. 75). They are of various shapes, and are used for various cutting purposes, as knives, swords, and glaves. Two distinct methods of fastening the teeth to the wood prevail in the Polynesian Islands; firstly, by inserting them in a groove cut in the sides of the stick or weapon; and secondly, by arranging the teeth in a row, along the sides of the stick, between two small strips of wood on either side of the teeth, lashed on to the staff, in all cases, with small strings, composed of plant fibre. The points of the teeth are usually arranged in two opposite directions on the same staff, so that a severe cut may be given either in thrusting or withdrawing the weapon.

A similarly constructed implement, also edged with sharks' teeth, was found by Captain Graah on the east coast of Greenland, and is mentioned in Dr. King's paper on the industrial arts of the Esquimaux, in the *Journal of the Ethnological Society*. The teeth in this implement were secured by small nails, or pegs of bone; it was used formerly on the West Coast. A precisely similar implement (Fig. 76), but showing an advance in art by being set with a row of chips of meteoric iron, was found amongst the Esquimaux of Davis Strait, and is now in the department of meteorolites in the British Museum. Others, of the same nature, from Greenland, are in the Christy collection (Fig. 77). The 'pacho' of the South Sea Islands appears to have been a sort of club, armed on the inner side with sharks' teeth, set in the same manner. The Tapoyers, of Brazil, used a kind of club, which was broad at the end, and set with teeth and bones, sharpened at the point.

Hernandez gives an account of the construction of the Mexican 'maquahuilt' or Aztec war-club, which was armed on both sides with a row of obsidian flakes, stuck into holes, and fastened

with a kind of gum (Fig. 78). Herrera, the Spanish historian, also mentions these as swords of wood, having a groove in the fore part, in which the flints were strongly fixed with bitumen and thread. In 1530, according to the Spanish historians, Copan was defended by 30,000 men, armed with these weapons, amongst others; and similar weapons have been represented in the sculptures of Yucatan. They are also represented in Lord Kingsborough's important work on Mexican antiquities, from which the accompanying representations are taken (Figs. 78, 79, 80). One of these swords, having six pieces of obsidian on each side of the blade, is to be seen in a Museum in Mexico.

In the burial mounds of Western North America, Mr. Lewis Morgan, the historian of the Iroquois, mentions that rows of flint flakes have been found lying, side by side, in order, and suggesting the idea that they must have been fastened into sticks in the same manner as those of Mexico and Yucatan.

Throughout the entire continent of Australia the natives arm their spears with small sharp pieces of obsidian, or crystal, and recently of glass, arranged in rows along the sides near the point, and fastened with a cement of their own preparation, thereby producing a weapon which, though thinner in the shaft, is precisely similar in character to those already described (Figs. 81 and 82). Turning again to the northern hemisphere, we find in the Museum of Professor Nilsson, at Lund, in Sweden, a smooth, sharp-pointed piece of bone, found in that country, about six inches long, grooved on each side to the depth of about a quarter of an inch, into each of which grooves a row of fine, sharp-edged, and slightly-curved flints were inserted, and fixed with cement. The instrument thus armed was fastened to the end of a shaft of wood, and might either have been thrown by the hand or projected from a bow (Fig. 83). Another precisely similar implement (Fig. 84) is represented in the illustrated Catalogue of the Museum at Copenhagen, showing that in both these countries this system of constructing trenchant implements was employed. In Ireland, although there is no actual evidence of flints having been set in this manner, yet from the numerous examples of this class of weapon that are found elsewhere, and the frequent occurrence of flint implements of a form that would

well adapt them to such a purpose, the author of the Catalogue of the Royal Irish Academy expresses his opinion that the same arrangement may very possibly have existed in that country, and that the wood in which they were inserted may, like that which, as I have already said, is supposed to have held the flints found in the graves of the Iroquois, have perished by decay.

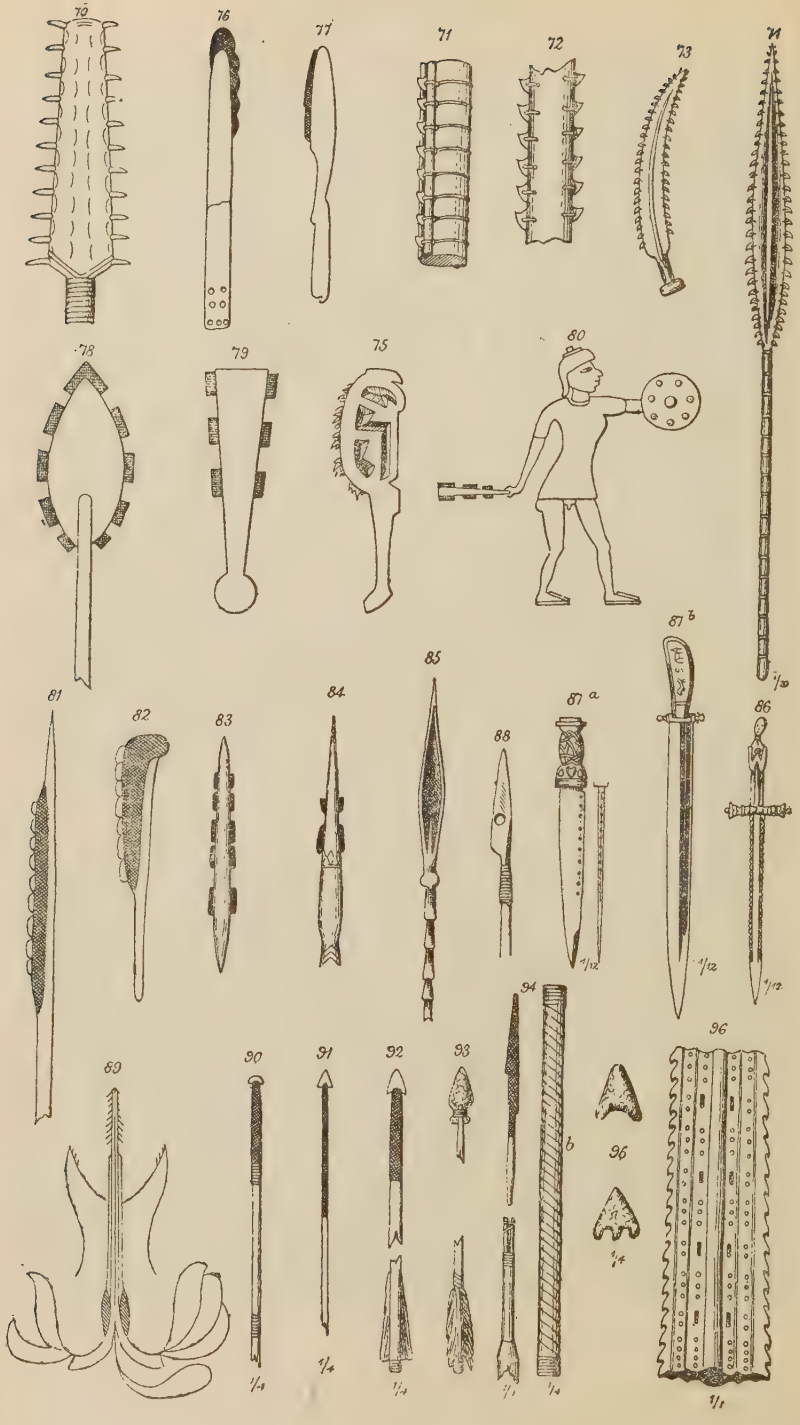
Poisoned weapons.—It is unnecessary to enter here into a detailed account of the use of poison by man and animals. Its use by man as a weapon of offence is chiefly confined to those tropical regions in which poisonous herbs and reptiles are most abundant. It is used by the Negroes, Bushmen, and Hottentots of Africa; in the Indian Archipelago, New Hebrides, and New Caledonia. It appears formerly to have been used in the South Seas. It is employed in Bootan; in Assam; by the Stiens of Cambodia; and formerly by the Moors of Mogadore. The Parthians and Scythians used it in ancient times; and it appears always to have been regarded by ancient writers as the especial attribute of barbarism. The Italian bravoes of modern Europe also used it. In America it is employed by the Darian Indians, in Guiana, Brazil, Peru, Paraguay, and on the Orinoco. The composition of the poison varies in the different races, the Bushmen and Hottentots using the venomous secretions of serpents and caterpillars, whilst most other nations of the world employ the poisonous herbs of the different countries they inhabit, showing that in all probability this must have been one of those arts which, though of very early origin, arose spontaneously and separately in the various quarters of the globe, after the human family had separated. This subject, however, is deserving of a separate treatment, and will be alluded to elsewhere.

In drawing a parallel between the weapons of men and animals used in the application of poison for offensive purposes, two points of similitude deserve attention.

Firstly, the poison gland of many serpents is situated on the upper jaw, behind and below the eyes. A long excretory duct extends from this gland to the outer surface of the upper jaw, and opens above and before the poison teeth, by which means the poison flows along the sheath into the upper opening of the tooth in such a manner as to secure its insertion into the wound. The

hollow interior of the bones with which the South American and other Indians arm the poisoned arrows secures the same object (Fig. 85); it contains the poisonous liquid, and provides a channel for its insertion into the wound. In the bravo's dagger of Italy, a specimen of which from my collection is shown in Fig. 86, a similar provision for the insertion of the poison is effected by means of a groove on either side of the blade, communicating with two rows of small holes, into which the poison flows, and is retained in that part of the blade which enters the wound. Nearly similar blades, with holes, have been found in Ireland, of which a specimen is in the Academy's Museum, and they have been compared with others of the same kind from India, but I am not aware that there is any evidence to show that they were used for poison. Some of the Indian daggers, however, are constructed in close analogy with the poison apparatus of the serpent's tooth, having an enclosed tube running down the middle of the blade, communicating with a reservoir for poison in the handle, and having lateral openings in the blade for the diffusion of the poison in the wound. Similar holes, but without any enclosed tube, and having only a groove on the surface of the blade to communicate with the holes, are found in some of the Scotch dirks, and in several forms of *couteau de chasse,* in which they appear to have been used merely with a view of letting air into the wound, and accelerating death (Figs. 87 *a* and *b*). The Scotch dirk, here represented, has a groove running from the handle along the back of the blade to within three and a half inches of the point. In the bottom of this groove ten holes are pierced, which communicate with other lateral holes at right angles, opening on to the sides of the blade. Daggers are still made at Sheffield for the South American market, with a small hole drilled through the blade, near the point, to contain the poison; and in my collection there is an iron arrow-point (Fig. 88), evidently formed of the point of one of these daggers, having the hole near the point.

It often happens that forms which, in the early history of an art, have served some specific object, are in later times applied to other uses, and are ultimately retained only in the forms of ornamentation. This seems to have been the case with the


70
76
77
71
72
73
74
78
79
75
80
81
82
83
84
85
88
87 a
87 b
86
89
90
91
92
93
94
b
96
96
1/4
1/1
1/12
1/20

pierced work upon the blades of weapons which, intended originally for poison, was afterwards used as air-holes, and ultimately for ornament only, as appears by a plug bayonet of the commencement of the eighteenth century in the Tower Armoury, No. 390 of the official Catalogue, for a drawing of which, as well as that of the Scotch dirk, I am indebted to Captain A. Tupper, a member of the Council of this Institution.

The second point of analogy to which I would draw attention is that of the multi-barbed arrows of most savages to the multi-barbed stings of insects, especially that of the bee (Fig. 89), which is so constructed that it cannot usually be withdrawn, but breaks off with its poisonous appendage into the wound. An exact parallel to this is found in the poisoned arrows of savages of various races, which, as already mentioned, are frequently armed with the point of the sting-ray, for the express purpose of breaking in the wound. In the arrows of the Bushmen, the shaft is often partly cut through, so as to break when it comes in contact with a bone, and the barb is constructed to remain in the wound when the arrow is withdrawn (Fig. 90). The same applies to the barbed arrows used with the Malay blowpipe (Fig. 91), and those of the wild tribes of Assam (Fig. 92), which are also poisoned. The arrow-points of the Shoshones of North America (Fig. 93), said to be poisoned, are tied on, purposely, with gut in such manner as to remain when the arrow is withdrawn. The arrows of the Macoushie tribe of Guiana (Fig. 94) are made with a small barbed and poisoned head, which is inserted in a socket in the shaft, in which it fits loosely, so as to detach in the wound. This weapon appears to form the link between the poisoned arrow and the fishing arrow or harpoon, which is widely distributed, and which I propose to describe on a subsequent occasion. Mr. Latham, of Wilkinson's, Pall Mall, has been kind enough to describe to me a Venetian dagger of glass, formerly in his possession; it had a tube in the centre for the poison, and the blade was constructed with three edges. By a sharp wrench from the assassin, the blade was broken off, and remained in the wound.

It has also been supposed that from their peculiar construction most of the triangular and concave-based arrow-heads of flint

that are found in this country, and in Ireland, were constructed for a similar purpose (Fig. 95).

The serrated edges of weapons, like those of the bee and the sting-ray, when used as arrow-points, were likewise instrumental in retaining the poison and introducing it into the wound, and this form was copied with a similar object in some of the Florentine daggers above mentioned, a portion of the blade of one of which, taken from Meyrick's *Ancient Arms and Armour*, is shown in Fig. 96.

Although the use of poison would in these days be scouted by all civilized nations as an instrument in war, we find it still applied to useful purposes in the destruction of the larger animals. The operation of whaling, which is attended with so much danger and difficulty, has of late been greatly facilitated by the use of a mixture of strychnine and 'woorali,' the well-known poison of the Indians of South America. An ounce of this mixture, attached to a small explosive shell fired from a carbine, has been found to destroy a whale in less than eighteen minutes, without risk to the whaler.

When we consider how impotent a creature the aboriginal and uninstructed man must have been, when contending with the large and powerful animals with which he was surrounded, we cannot too much admire that provision of nature which appears to have directed his attention, during the very earliest stages of his existence, to the acquirement of the subtile art of poisoning. In the forests of Guiana, there are tribes, such as the Otomacs, apparently weaponless, but which, by simply poisoning the thumb-nail with 'curare' or 'woorali,' at once become formidable antagonists. Poison is available for hunting as well as for warlike purposes: the South American Indians eat the monkeys killed by this means, merely cutting out the part struck, and the wild tribes of the Malay peninsula do not even trouble themselves to cut out the part before eating. The Bushmen, and the Stiens of Cambodia, use their poisoned weapons chiefly against wild beasts and elephants.

Thus we see that the most noxious of herbs and the most repulsive of reptiles have been the means ordained to instruct mankind in what, during the first ages of his existence, must

have been the most useful of arts. We cannot now determine how far this agent may have been influential in exterminating those huge animals, the *Elephas primigenius* and *Rhinoceros tichorhinus,* with the remains of which the earliest races of man have been so frequently associated, and which, in those primaeval days, before he began to turn his hand to the destruction of his own species, must have constituted his most formidable enemies. . . . .—A. Lane-Fox Pitt-Rivers, *Journal of the Royal United Service Institution,* Vol. XI, and reprinted in *The Evolution of Culture,* 57–82 (Clarendon Press, 1906).

ON THE ORIGIN OF THE PLOUGH AND WHEEL-CARRIAGE

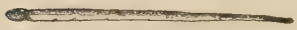
. . . . Not only the beginning of agriculture, but the invention of the plough itself, are pre-historic. The plough was known to the ancient Egyptians and Babylonians, and the very existence of these nations points to previous thousands of years of agricultural life, which alone could have produced such dense, settled, and civilised populations. It was with a sense of what the plough had done for them, that the old Egyptians ascribed its invention to Osiris, and the Vedic bards said the Açvins taught its use to Manu, the first man. Many nations have glorified the plough in legend and religion, perhaps never more poetically than where the Hindus celebrate *Sîtâ,* the spouse of Râma, rising brown and beauteous, crowned with corn-ears, from the ploughed field; she is herself the furrow (*sîtâ*) personified. Between man's first rude husbandry, and this advanced state of tillage, lies the long interval which must be filled in by other than historical evidence. What has first to be looked for is hardly the actual invention of planting, which might seem obvious even to rude tribes who never practise it. Every savage is a practical botanist skilled in the localities and seasons of all useful plants, so that he can scarcely be ignorant that seeds or roots, if put into proper places in the ground, will grow. When low tribes are found not tilling the soil but living on wild food, as apparently all mankind once did, the reason of the absence of agriculture would seem to be not mere ignorance, but insecurity, roving life, unsuitable climate, want of proper plants, and in regions where wild fruits are plentiful, sheer idleness and carelessness. On looking into the condition

of any known savage tribes, Australians, Andamaners, Botocudos, Fuegians, Esquimaux, there is always one or more of these reasons to account for want of tillage. The turning-point in the history of agriculture seems to be not the first thought of planting, but the practical beginning by a tribe settled in one spot to assist nature by planting a patch of ground round their huts. Not even a new implement is needed. Wandering tribes already carry a stick for digging roots and unearthing burrowing animals, such as the *katta* of the Australians, with its point hardened in the fire (Fig. 1), or the double-ended stick which Dobrizhoffer mentions as carried by the Abipone women to dig up eatable roots, knock down fruits or dry branches for fuel, and even, if need were, break an enemy's head with. The stick which dug up wild roots passes to the kindred use of planting, and may be reckoned as the primitive agricultural implement. It is interesting to notice how the Hottentots in their husbandry break up the ground with the same stone-weighted stick they use so skilfully in root-digging or unearthing animals. The simple pointed stake is often mentioned as the implement of barbaric husbandry, as when the Kurubars of South India are described as with a sharp stick digging up spots of ground in the skirts of the forest, and sowing them with ragy; or where it is mentioned that the Bodo and Dhimal of North-East India, while working the ground with iron bills and hoes, use a 4-ft. two-pointed wooden staff for a dibble. The spade, which is hardly to be reckoned among primitive agricultural implements, may be considered as improved from the digging-stick by giving it a flat paddle-like end, or arming it with a broad pointed metal blade, and afterwards providing a foot-step. In the Hebrides is to be seen a curious implement called *caschrom*, a kind of heavy bent spade with an iron-shod point, which has been set down as a sort of original plough; but its action is that of a spade, and it seems out of the line of development of the plough. To trace this, we have to pass from the digging-stick to the hoe.

All implements of the nature of hoes seem derived from the pick or axe. Thus the New Caledonians are said to use their wooden picks both as a weapon and for tilling the ground. The *tima* or Maori hoe (Fig. 2), from R. Taylor's, "New Zealand and

its Inhabitants," p. 423, is a remarkable curved wooden implement in one piece. It is curious that of all this class of agricultural implements, the rudest should make its appearance in Europe. Tradition in South Sweden points to waste pieces of once tilled land in the forests and wilds, as having been the fields of the old "hackers," and within a generation there was still to be seen in use on forest farms the "hack" itself (Fig. 3), made of a stake of spruce-fir, with at the lower end a stout projecting branch cut short and pointed. Even among native tribes of America a more artificial hoe than this was found in use. Thus the hoe used by the North American women in preparing the soil for planting maize after the old stalks had been burnt is described as a bent piece of wood, three fingers wide, fixed to a long handle. In other North American tribes, the women hoed with a shoulderblade of an elk or buffalo, or a piece of the shell of a tortoise fixed to a straight handle. From this stage we come up to implements with metal blades, such as the Kafir axe, which by turning the blade in the handle becomes an implement for hoeing. The heavy-bladed Indian hoe (Sanskrit *kuddâla*) called *kodâly* in Malabar, which is shown here (Fig. 4), is one example of the iron-bladed hoe, of clumsy and ancient type. The modern varieties of the hoe need no detailed description here.

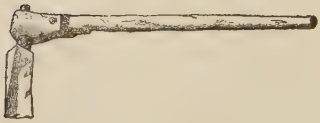
That the primitive plough was a hoe dragged through the ground to form a continuous furrow, is seen from the very structure of early ploughs, and was accepted as obvious by Ginzrot ("Wagen und Fahrwerke der Griechen und Römer," vol. i, and, Klemm, "Culturwissenschaft," part ii, p. 78). The evidence of the transitions through which agricultural implements have passed in Sweden during the last ten centuries or so, which was unknown to these writers, is strongly confirmatory of the same view. It appears that the fir-tree hack (Fig. 3) was followed by a heavier wooden implement of similar shape, which was dragged by hand, making small furrows; this "furrow-crook" is still used for sowing. Afterwards was introduced the "plough-crook," made in two pieces, the share with the handle, and the pole for drawing. The share was afterwards shod with a three-cornered iron bill, but the implement was long drawn by hand, till eventually it came to be drawn by mares or cows. Thus in comparatively



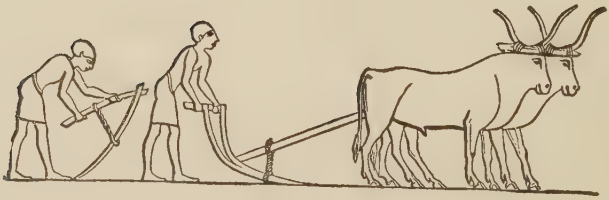
1

2

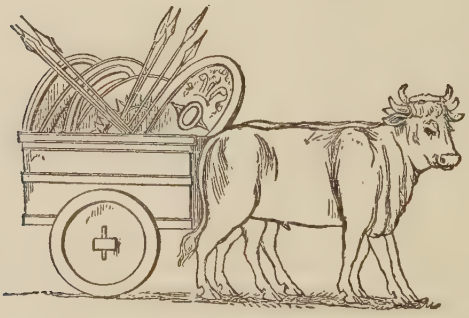
3



4



5



6

modern times a transformation took place in Sweden remarkably resembling that of which we have circumstantial evidence as having happened in ancient Egypt. The Egyptian monuments show a plough, which was practically a great hoe, being dragged by a rope by men. Still more perfect is the ploughing scene here copied in Fig. 5. Here the man who follows the plough to break up the clods is working with the ordinary Egyptian hoe, remarkable for its curved wooden blade longer than the handle, and prevented from coming abroad by the cord attaching the blade to the handle half-way down. This peculiar implement, with its cord to hold it together, reappears on a larger scale in the plough itself, where the straight stick is lengthened to form the pole by which the oxen draw it, and a pair of handles are added by which the ploughman keeps down and guides the plough. . . . .

The plough, drawn by oxen or horses, and provided with wheels, has taken on itself the accessories of a wheel-carriage. But when the plough is traced back to its earliest form of a hoe dragged by men, its nature has little in common with that of the vehicle. Though the origin of the wheel-carriage is even more totally lost in pre-historic antiquity than that of the plough, there seems nothing to object to the ordinary theoretical explanation that the first vehicle was a sledge dragged along the ground, that when heavy masses had to be moved, rollers were put under the sledge, and that these rollers passed into wheels forming part of the carriage itself. The steps of such a transition, with one notable exception which will be noticed, are to be actually found. The sledge was known in ancient Egypt (*see* the well-known painting from El Bersheh of a colossal statue being dragged by men with ropes on a sledge along a greased way, Wilkinson, "Ancient Egyptians," vol. iii). On mountain-roads, as in Switzerland, as well as on the snow in winter, the sledge remains an important practical vehicle. The use of rollers under the sledge was also familiar to the ancients (*see* the equally well-known Assyrian sculpture of the moving of the winged bull, in Layard's "Nineveh and Babylon," p. 110). If now the middle part of the trunk of a tree used as a roller were cut down to a mere axle, the two ends remaining as solid drums, and stops were fixed under the sledge to prevent the axle from running away,

the result would be the rudest imaginable cart. I am not aware that this can be traced anywhere in actual existence, either in ancient or modern times; if found, it would be of much interest as vouching for this particular stage of invention of the wheel-carriage. But the stage which would be theoretically the next improvement, is to be traced in practical use; this is to saw two broad drums off a tree-trunk, and connect them to a stout bar through their centres, pinned fast, so that the whole turns as a single roller. The solid drum-wheel was used in the farm-carts of classic times (*see* the article "Plaustrum," by Yates, in Smith's "Dictionary of Greek and Roman Antiquities"). The ox-wagon here shown is taken from the Antonine column (Fig. 6); it appears to have solid wheels, and the square end of the axle proves that it and its drum-wheels turned round together in one. A further improvement was to make the wheel with several pieces nailed together, which would be less likely to split. The ancient Roman farm-carts were mostly made with such wheels, as are their successors which are used to this day with wonderfully little change, as in Greece and Portugal. . . . . Considering that the railway-carriage builder gives up the coach-wheel principle, and returns to the primitive construction of the pair of wheels fixed to the axle turning in bearings, we see that our ordinary carriage-wheels turning independently on their axles are best suited to comparatively narrow wheels, and to smooth ground or made roads. Here they give greater lightness and speed, and especially have the advantage of easily changing direction and turning, which in the old block-wheel cart can only be done by gradually slewing round in a wide circuit. . . . .—E. B. Tylor, *Journal of the Anthropological Institute,* 10:74–81.

EARLY MODES OF NAVIGATION

I. SOLID TRUNKS AND DUG-OUT CANOES

. . . . It requires but little imagination to conceive an idea of the process by which a wooden support in the water forced itself upon the notice of mankind. The great floods to which the valleys of many large rivers are subject, more especially those which have their sources in tropical regions, sometimes devastate the whole country within miles of their banks, and by their sud-

denness frequently overtake and carry down numbers of both men and animals, together with large quantities of timber which had grown upon the sides of the valleys. The remembrances of such deluges are preserved in the traditions of many savage races, and there can be little doubt that it was by this means that the human race first learnt to make use of floating timber as a support for the body. The wide distribution of the word signifying ship—Latin *navis;* Greek *vaûς*; Sanskrit *nau;* Celtic *nao;* Assam *nao;* Port Jackson, Australia, *nao*—attests the antiquity of the term. In Bible history the same term has been employed to personify the tradition of the first shipbuilder, *Noah.*

It is even said, though with what truth I am not aware, that the American grey squirrel (*Sciurus migratorius*), which migrates in large numbers, crossing large rivers, has been known to embark on a piece of floating timber, and paddle itself across.

The North American Indians frequently cross rivers by clasping the left arm and leg round the trunk of a tree, and swimming with the right.

The next stage in the development of the canoe would consist in pointing the ends, so as to afford less resistance to the water. In this stage we find it represented on the NW. coast of Australia. Gregory, in the year 1861, says that his ship was visited on this coast by two natives, who had paddled off on logs of wood shaped like canoes, not hollowed, but very buoyant, about 7 feet long, and 1 foot thick, which they propelled with their hands only, their legs resting on a little rail made of small sticks driven in on each side. Mr. T. Baines, also, in a letter quoted by the Rev. J. G. Wood, in his *Natural History of Man* (vol. ii. p. 7), speaks of some canoes which he saw in North Australia as being 'mere logs of wood, capable of carrying a couple of men.' Others used on the north coast are dug out, but as these are provided with an outrigger, they have probably been derived from New Guinea. The canoes used by the Australians on the rivers consist either of a bundle of rushes bound together and pointed at the ends, or else they are formed of bark in a very simple manner; but on the south-east coast, near Cape Howe, Captain Cook, in his first voyage, found numbers of canoes in use by the natives on the seashore. These he described

as being very like the smaller sort used in New Zealand, which were hollowed out by means of fire. One of these was of a size to be carried on the shoulders of four men.

It has been thought that the use of hollowed canoes may have arisen from observing the effect of a split reed or bamboo upon the water. The nautilus is also said to have given the first idea of a ship to man; and Pliny, Diodorus, and Strabo have stated that large tortoise-shells were used by primitive races of mankind (Kitto, *Pictorial Bible*). It has also been supposed that the natural decay of trees may have first suggested the employment of hollow trees for canoes, but such trees are not easily removed entire. It is difficult to conceive how so great an advance in the art of shipbuilding was first introduced, but there can be no doubt that the agent first employed for this purpose was fire.

I have noticed when travelling in Bulgaria that the gipsies and others who roam over that country usually select the foot of a dry tree to light their cooking fire; the dry wood of the tree, combined with the sticks collected at the foot of it, makes a good blaze, and the tree throws forward the heat like a fireplace. Successive parties camping on the same ground, attracted thither by the vicinity of water, use the same fireplaces, and the result is that the trees by degrees become hollowed out for some distance from the foot, the hollow part formed by the fire serving the purpose of a semi-cylindrical chimney. Such a tree, torn up by the roots, or cut off below the part excavated by the fire, would form a very serviceable canoe, the parts not excavated by the fire being sound and hard. The Andaman islanders use a tree in this manner as an oven, the fire being kept constantly burning in the hollow formed by the flames.

One of the best accounts of the process of digging out a canoe by means of fire is that described by Kalm, on the Delaware river, in 1747. He says that, when the Indians intend to fell a tree, for want of proper instruments they employ fire; they set fire to a quantity of wood at the roots of the tree, and in order that the fire might not reach further up than they would have it, they fasten some rags to a pole, dip them in water, and keep continually washing the tree a little above the

fire until the lower part is burnt nearly through; it is then pulled down. When they intend to hollow a tree for a canoe, they lay dry branches along the stem of the tree as far as it must be hollowed out, set them on fire, and replace them by others. While these parts are burning, they keep pouring water on those parts that are not to be burnt at the sides and ends. When the interior is sufficiently burnt out, they take their stone hatchets and shells and scoop out the burnt wood. These canoes are usually 30 or 40 feet long. In the account of one of the expeditions sent out by Raleigh in 1584 a similar description is given of the process adopted by the Indians of Virginia, except that, instead of sticks, resin is laid on to the parts to be excavated and set fire to: canoes capable of holding twenty persons were formed in this manner.

The Waraus of Guiana employ fire for excavating their canoes; and when Columbus discovered the Island of Guanahani or San Salvador, in the West Indies, he found [fire] employed for this purpose by the natives, who called their boats 'canoe,' a term which has ever since been employed by Europeans to express this most primitive class of vessel.

Dr. Mouat says that, in Blair's time, the Andaman islanders excavated their canoes by the agency of fire; but it is not employed for that purpose now, the whole operation being performed by hand. Symes, in 1800, speaks of the Burmese war-boats, which were excavated partly by fire and partly by cutting. Nos. 1276 and 1277 of my collection are models of these boats. In New Caledonia, Turner, in 1845, says that the natives felled their trees by means of a slow fire at the foot, taking three or four days to do it. In excavating a canoe, he says, they kindle a fire over the part to be burnt out, and keep dropping water over the sides and ends, so as to confine the fire to the required spot, the burnt wood being afterwards scraped out with stone tools. The New Zealanders, and probably the Australians also, employ fire for this purpose [Cook]. The canoes of the Krumen in West Africa are also excavated by means of fire.

A further improvement in the development of the dug-out canoe consists in bending the sides into the required form after it has been dug out. This process of fire-bending has already

been described on p. 87 of my *Catalogue* (Parts i and ii), when speaking of the methods employed by the Esquimaux and Australians in straightening their wooden spears and arrow-shafts. The application of this process to canoe-building by the Ahts of the north-west coast of North America is thus described by Mr. Wood in his *Natural History of Man,* vol. ii. p. 732. The canoe is carved out of a solid trunk of cedar (*Thuja gigantea*). It is hollowed out, not by fire, but by hand, and by means of an adze formed of a large mussel-shell; the trunk is split lengthwise by wedges. All is done by the eye. When it is roughly hollowed it is filled with water, and ret-hot stones put in until it boils. This is continued until the wood is quite soft, and then a number of cross-pieces are driven into the interior, so as to force the canoe into its proper shape, which it ever afterwards retains. While the canoe is still soft and pliant, several slight cross-pieces are inserted, so as to counteract any tendency towards warping. The outside of the vessel is then hardened by fire, so as to enable it to resist the attacks of insects, and also to prevent it cracking when exposed to the sun. The inside is then painted some bright colour, and the outside is usually black and highly polished. This is produced by rubbing it with oil after the fire has done its work. Lastly, a pattern is painted on its bow. There is no keel to the boat. The red pattern of the painting is obtained by a preparation of *anato*. For boring holes the Ahts use a drill formed by a bone of a bird fixed in a wooden handle.

A precisely similar process to this is employed in the formation of the Burmese dug-out canoes, and has thus been described to me by Capt. O'Callaghan, who witnessed the process during the Burmese War in 1852. A trunk of a tree of suitable length, though much less in diameter than the intended width of the boat, is cut into the usual form, and hollowed out. It is then filled with water, and fires are lit, a short distance from it, along its sides. The water gradually swells the inside, while the fire contracts the outside, till the width is greatly increased. The effect thus produced is rendered permanent by thwarts being placed so as to prevent the canoe from contracting in width as it dries; the depth of the boat is increased by a plank at each

side, reaching as far as the ends of the hollowed part. Canoes generally show traces of the fire and water treatment just described, the inner surface being soft and full of superficial cracks, while the outer is hard and close.

It is probable that this mode of bending canoes has been discovered during the process of cooking, in which red-hot stones are used in many countries to boil the water in vessels of skin or wood, in which the meat is cooked. No. 1256 of my collection is a model of an Aht canoe, painted as here described. No. 1257 is a full-sized canoe from this region, made out of a single trunk; it is not painted, so that the grain of the wood can be seen.

The distribution of the dug-out canoe appears to be almost universal. It is especially used in southern and equatorial regions. Leaving Australia, we find it employed with the outrigger, which will be described hereafter (pp. 218–9), in many parts of the Polynesian and Asiatic islands, including New Guinea, New Zealand, New Caledonia, and the Sandwich Islands. It was not used by the natives of Tasmania, who employed a float consisting of a bundle of bark and rushes, which will be described in another place (p. 203). Wilkes speaks of it in Samoa, at Manilla, and the Sooloo Archipelago. De Guignes in 1796 and De Morga in 1609 saw them in the Philippines, where they are called *pangues*, some carrying from two to three and others from twelve to fifteen persons. They are (or were) also used in the Pelew, Nicobar, and Andaman Isles. In the India Museum there is a model of one from Assam, used as a mail boat, and called *dâk nao*. In Burmah, Symes, in 1795, describes the war-boats of the Irrawaddy as 80 to 100 feet long, but seldom exceeding 8 feet in width, and this only by additions to the sides; carrying fifty to sixty rowers, who use short oars that work on a spindle, and who row instead of paddling. Captain O'Callaghan, however, informs me that they sometimes use paddles (Nos. 1276 and 1277). They are made in one piece of the teak tree. The king had five hundred of these vessels of war. They are easily upset, but the rowers are taught to avoid being struck on the broadside; they draw only 3 feet of water. On the Menan, in Siam, Turpin, in 1771, says that the king's *ballons* are made of

a single tree, and will contain 150 rowers; the two ends are very much elevated, and the rowers sit cross-legged, by which they lose a great deal of power. The river vessels in Cochin China are also described as being of the same long, narrow kind. At Ferhabad, in Persia, Pietro della Valle, in 1614, describes the canoes as being flat-bottomed, hollow trees, carrying ten to twelve persons.

In Africa, Duarte Barbosa, in 1514, saw the Moors at Zuama make use of boats, *almadias*, hollowed out of a single trunk, to bring clothes and other merchandise from Angos. Livingstone says the canoes of the Bayeye of South Africa are hollow trees, made for use and not for speed. If formed of a crooked stem they become crooked vessels, conforming to the line of the timber. On the Benuwé, at its junction with the [Yola], Barth, for the first time in his travels southward, saw what he describes as rude little shells hollowed out of a single tree; they measured 25 to 30 feet in length, 1 to 1½ foot in height, and 16 inches in width; one of them, he says, was quite crooked. On the White Nile, in Unyoro, Grant says that the largest canoe carried a ton and a half, and was hollowed out of a trunk. On the Kitangule, west of Lake Victoria Nyanza, near Karague, he describes the canoes as being hollowed out of a log of timber 15 feet long and the breadth of an easy-chair. These kind of canoes are also used by the Makoba east of Lake Ngami, by the Apingi and Camma, and the Krumen of the West African coast; of which last, No. 1272 of my collection is a model.

In South America the Patagonians use no canoes, but in the northern parts of the continent dug-out canoes are common. One described by Condamine, in 1743, was from 42 to 44 feet long, and only 3 feet wide. They are also used in Guiana, and Professor Wilson says that the dug-out canoe is used throughout the West Indian Archipelago. According to Bartram, who is quoted by Schoolcraft, the large canoes formed out of the trunks of cypress trees, which descended the rivers of Florida, crossed the Gulf, and extended their navigation to the Bahama Isles, and even as far as Cuba, carrying twenty to thirty warriors. Kalm, in 1747, gives some details respecting their construction on the Delaware river already referred to (p. 191), and says that the

materials chiefly employed in North America are the red juniper, red cedar, white cedar, chestnut, white oak, and tulip tree. Canoes of red and white cedar are the best, because lighter, and they will last as much as twenty years, whereas the white oak barely lasts above six years. In Canada these dug-outs were made of the white fir. The process of construction on the west coast of North America has been already described (p. 192).

In Europe Pliny mentions the use of canoes hollowed out of a single tree by the Germans. Amongst the ancient Swiss lake-dwellers at Robenhausen, associated with objects of the stone age, a dug-out canoe, or *Einbaum*, made of a single trunk 12 feet long and 2½ wide, was discovered (Keller, *Lake Dwellings*, Lee², p. 45). In Ireland, Sir William Wilde says that amongst the ancient Irish dug-out canoes were of three kinds. One was small, trough-shaped, and square at the ends, having a projection at either end to carry it by; the paddlers sat flat at the bottom and paddled, there being no rowlocks to the boat. A second kind was 20 feet in length and 2 in breadth, flat-bottomed, with round prow and square stern, strengthened by thwarts carved out of the solid and running across the boat, two near the stem and one near the stern. The prow was turned up; one of these was discovered in a bog on the coast of Wexford, 12 feet beneath the surface. The third sort was sharp at both ends, 21 feet long, 12 inches broad, and 8 inches deep, and flat-bottomed. These canoes are often found in the neighbourhood of the crannoges, or ancient lake-habitations of the country, and were used to communicate with the land; also in the beds of the Boyne and Bann. Ware says, that dug-out canoes were used in some of the Irish rivers in his time, and to this day I have seen paddles used on the Blackwater, in the south of Ireland. Professor Wilson says that several dug-out canoes have been found in the ancient river-deposits of the Clyde, and also in the neighbourhood of Falkirk. In one of those discovered in the Clyde deposits, at a depth of 25 feet from the surface, a stone almond-shaped celt was found. Others have been found in the ancient river-deposits of Sussex and elsewhere, in positions which show that the rivers must probably have formed arms of the sea, at the time they were sunk.

II. VESSELS IN WHICH THE PLANKS ARE STITCHED TO EACH OTHER

All vessels of the dug-out class are necessarily long and narrow, and very liable to upset; the width being limited by the size of the tree, extension can only be given to them by increasing their length. In order to give greater height and width to these boats, planks are sometimes added at the sides and stitched on to the body of the canoe by means of strings or cords, composed frequently of the bark or leaves of the tree of which the body is made. In proportion as these laced-on gunwales were found to answer the purpose of increasing the stability of the vessel, their number was increased; two such planks were added instead of one, and as the joint between the planks was by this means brought beneath the water line, means were taken to caulk the seams with leaves, pitch, resin, and other substances. Gradually the number of side planks increased and the solid hull diminished, until ultimately, it dwindled into a bottom-board, or keel, at the bottom of the boat, serving as a centre-piece on which the sides of the vessel were built. Still the vessel was without ribs or framework; ledges on the sides were carved out of the solid substance of each plank, by means of which they were fastened to the ledges of the adjoining plank, and the two contiguous ledges served as ribs to strengthen the boat; finally, a framework of vertical ribs was added to the interior and fastened to the planks by cords. Ultimately the stitching was replaced by wooden pins, and the side planks pinned to each other and to the ribs; and these wooden pins in their turn were supplanted by iron nails.

In different countries we find representations of the canoe in all these several stages of development. Of the first stage, in which side planks were added to the body of the dug-out canoe, to heighten it, the New Zealand canoe, No. 1259 of my collection, is an example. Capt. Cook describes this as solid, the largest containing from thirty men upwards. One measured 70 feet in length, 6 in width, and 4 deep. Each of the side pieces was formed of an entire plank, about 12 inches wide, and about 1½ inch thick, laced on to the hollow trunk of the tree by flaxen cords, and united to the plank on the opposite side by thwarts across the boat. These canoes have names given to them like European vessels.

On the Benuwé, in Central Africa, Barth describes a vessel in this same early stage of departure from the original dug-out trunk. It consisted of 'two very large trunks joined together with cordage, just like the stitching of a shirt, and without pitching, the holes being merely stuffed with grass. It was not watertight, but had the advantage,' he says, 'over the dug-out canoes used on the same river, in not breaking if it came upon a rock, being, to a certain degree, pliable. It was 35 feet long, and 26 inches wide in the middle.' No. 1258 of my collection is a model of one of these. The single plank added to the side of the Burmese dug-out canoe has been already noticed (p. 193). Although my informant does not tell me that these side planks are sewn on, I have no doubt, judging by analogy, that this either is or was formerly the case.

The Waraus of Guiana are the chief canoe-builders of this part of South America, and to them other tribes resort from considerable distances. Their canoe is hollowed out of a trunk of a tree, and forced into its proper shape partly by means of fire and partly by wedges, upon a similar system to that described in speaking of the Ahts of North America (p. 192) and the Burmese; the largest have the sides made higher by a narrow plank of soft wood, which is laced upon the gunwale, and the seam caulked. This canoe is alike at both ends, the stem and stern being pointed, curved, and rising out of the water; there is no keel, and it draws but a few inches of water. This appears to be the most advanced stage to which the built-up canoe has arrived on either continent of America, with the exception of Tierra del Fuego, where Commodore Byron, in 1765, saw canoes in the Straits of Magellan made of planks sewn together with thongs of raw hide; these vessels are considerably raised at the bow and stern, and the larger ones are 15 feet in length by 1 yard wide. They have also been described by more recent travellers. Under what conditions have these miserable Fuegians been led to the employment of a more complex class of vessel than their more advanced congeners of the north?

In order to trace the further development of the canoe in this direction, we must return to Africa and the South Seas. On the island of Zanzibar, Barbosa, in 1514, says that the in-

habitants of this island, and also Penda and Manfia, who are Arabs, trade with the mainland by means of 'small vessels very loosely and badly made, without decks and with a single mast; all their planks are sewn together with cords of reed or matting, and the sails are of palm mats.' On the river Yeou, near Lake Tchad, in Central Africa, Denham and Clapperton saw canoes 'formed of planks, rudely shaped with a small hatchet, and strongly fastened together by cords passed through holes bored in them, and a wisp of straw between, which the people say effectually keeps out the water; they have high poops like the Grecian boats, and would hold twenty or thirty persons.' On the Logon, south-east of Lake Tchad, Barth says the boats are built 'in the same manner as those of the Budduma, except that the planks consist of stronger wood, mostly *Birgem,* and generally of larger size, whilst those of the Budduma, consist of the frailest material, viz. *Fogo.* In both, the joints of the planks are provided with holes, through which ropes are passed, overlaid with bands of reed tightly fastened upon them by smaller ropes, which are again passed through small holes stuffed with grass.' On the Victoria Nyanza, in East Central Africa, Grant speaks of 'a canoe of five planks sewn together, and having four cross-bars or seats. The bow and stern are pointed, standing for a yard over the water, with a broad central plank from stem to stern, rounded outside (the vestige of the dug-out trunk), and answering for a keel.'

Thus far we have found the planks of the vessels spoken of, merely fastened by cords passed through holes in the planks, and stuffed with grass or some other material, and the accounts speak of their being rarely water-tight. Such a mode of constructing canoes might serve well enough for river navigation, but would be unserviceable for sea craft. Necessity is the mother of invention, and accordingly we must seek for a further development of the system of water-tight stitching, amongst those races in a somewhat similar condition of culture, which inhabit the islands of the Pacific and the borders of the ocean between it and the continent of Africa.

The majority of those vessels now to be described are furnished with the outrigger; but as the distribution of this con-

trivance will be traced subsequently (p. 218 ff.), it will not be necessary to describe it in speaking of the stitched plank-work.

In the Friendly Isles Captain Cook, in 1773, says 'the canoes are built of several pieces sewed together with bandage in so neat a manner that on the outside it is difficult to see the joints. All the fastenings are on the inside, and pass through *kants* or ridges, which are wrought on the edges and ends of the several boards which compose the vessel.' At Otaheite he speaks of the same process, and says that the chief parts are formed separately without either saw, plane, or other tool. La Perouse gives an illustration of an outrigger canoe from Easter Island, the sides of which are formed of drift wood sewn together in this manner. At Wytoohee, one of the Paumotu, or Low Archipelago, Wilkes, in 1838, says that the canoes are formed of strips of coco-nut tree sewed together. Speaking of those of Samoa, he describes the process more fully. 'The planks are fastened together with *sennit;* the pieces are of no regular size or shape. On the inside edge of each plank is a ledge or projection, which serves to attach the sennit, and connect and bind it closely to the adjoining one. It is surprising,' he says, 'to see the labour bestowed on uniting so many small pieces together, when large and good planks might be obtained. Before the pieces are joined, the gum from the husk of the bread-fruit tree is used to cement them close, and prevent leakage. These canoes retain their form much more truly than one would have imagined; I saw few whose original model had been impaired by service. On the outside the pieces are so closely fitted as frequently to require close examination before the seams can be detected. The perfection of workmanship is astonishing to those who see the tools with which it is effected. They consist now of nothing more than a piece of iron tied to a stick, and used as an adze; this, with a gimlet, is all they have, and before they obtained their iron tools, they used adzes made of hard stone and fish-bone.' The construction of the Fiji canoe, called *drua,* is described by Williams in great detail. A keel or bottom board is laid in two or three pieces, carefully scarfed together. From this the sides are built up, without ribs, in a number of pieces varying from three to twenty feet.

The edges of these pieces are fastened by ledges, tied together in the manner already described. A white pitch from the bread-fruit tree, prepared with an extract from the coco-nut kernel, is spread uniformly on both edges, and a fine strip of *masi* laid between. The binding of sennit with which the boards, or *vanos,* as they are called, are stitched together is made tighter by small wooden wedges inserted between the binding and the wood, in opposite directions. The ribs seen in the interior of these canoes are not used to bring the planks into shape, but are the last things inserted, and are for uniting the deck more firmly with the body of the canoe. The carpenters in Fiji constitute a distinct class, and have chiefs of their own. The Tongan canoes were inferior to those of Fiji in Captain Cook's time, but they have since adopted Fiji patterns. The Tongans are better sailors than the Fijians. Wilkes describes a similar method of building vessels in the Kingsmill Islands, but with varieties in the details of construction. 'Each canoe has six or eight timbers in its construction; they are well modelled, built in frames, and have much sheer. The boards are cut from the coco-nut tree, from a few inches to six or eight feet long, and vary from five to seven inches in width. These are arranged as the planking of a vessel, and very neatly put together, being sewed with sennit. For the purpose of making them water-tight they use a slip of pandanus leaf, inserted as our coopers do in plugging a cask. They have evinced much ingenuity,' he says, 'in attaching the uprights to the flat timbers.' It is difficult, without the aid of drawings, to understand exactly the peculiarities of this variety of construction, but he says they are secured so as to have all the motion of a double joint, which gives them ease, and comparative security in a seaway.

Turning now to the Malay Archipelago, Wallace speaks of a Malay *prahau* in which he sailed from Macassar to New Guinea, a distance of 1,000 miles, and says that similar but smaller vessels had not a single nail in them. The largest of these, he says, are from Macassar, and the Bugi countries of the Celebes and Boutong. Smaller ones sail from Ternate, Pidore, East Ceram, and Garam. The majority of these, he says, have stitched planks. No. 1268 of my collection is a model of a

vessel employed in those seas. Wallace says that the inhabitants of Ke Island, west of New Guinea, are the best boat-builders in the archipelago, and several villages are constantly employed at the work. The planks here, as in the Polynesian Islands, are all cut out of the solid wood, with a series of projecting ledges on their edges in the inside. But here we find an advance upon the Polynesian system, for the ledges of the planks are pegged to each other with wooden pegs. The planks, however, are still fastened to the ribs by means of *rattans*. The principles of construction are the same as in those of the Polynesian Islands, and the main support of the vessel still consists in the planks and their ledges, the ribs being a subsequent addition; for he says that after the first year the rattan-tied ribs are generally taken out and replaced by new ones, fitted to the planks and nailed, and the vessel then becomes equal to those of the best European workmanship. This constitutes a remarkable example of the persistency with which ancient customs are retained, when we find each vessel systematically constructed, in the first instance, upon the old system, and the improvement introduced in after years. I wonder whether any parallel to this could be found in a British arsenal. The psychical aspect of the proceeding seems not altogether un-English.

Extending our researches northward, we find that Dampier, in 1686, mentions, in the Bashee Islands, the use of vessels in which the planks are fastened with wooden pins. On the Menan, in Siam, Turpin, in 1771, speaks of long, narrow boats, in the construction of which neither nails nor iron are employed, the parts being fastened together with roots and twigs which withstand the destructive action of the water. They have the precaution, he says, to insert between the planks a light, porous wood, which swells by being wet, and prevents the water from penetrating into the vessel. When they have not this wood, they rub the chinks, by which the water enters, with clay. In the India Museum there is a model of a very early form of vessel from Burmah, described as a trading vessel. The bottom is dug out, and the sides formed of planks laced together. A large stone is employed for an anchor. Here we see that an inferior description of craft survived, upon the rivers, in the midst of a higher

civilization which has produced a superior class of vessel upon the seas. . . . .

III. BARK CANOES

The use of bark for canoes might have been suggested by the hollowed trunk; but, on the other hand, we find this material employed in Australia, where the hollowed trunk is not in general use. Bark is employed for a variety of purposes, such as clothing, materials for huts, and so forth. Some of the Australian shields are constructed of the bark of trees. The simplest form of canoe in Australia consists, as already mentioned, of a mere bundle of reeds and bark pointed at the ends. It is possible that the use of large pieces of bark in this manner may have suggested the employment of the bark alone. Belzoni mentions crossing to the island of Elephantine, on the Nile, in a ferry-boat which was made of branches of palm trees, fastened together with cords, and covered on the outside with a mat pitched all over. The solid papyrus boats represented on the pavement at Praeneste, before mentioned, have evidently some other substance on the outside of them; and Bruce imagines that the junks of the Red Sea were of papyrus, covered with leather. The outer covering would prevent the water from soaking into the bundle of sticks, and thus rendering it less buoyant. Bark, if used in the same manner, would serve a like purpose, and thus suggest its use for canoe-building. Otherwise I am unable to conceive any way in which bark canoes can have originated, except by imitation of the dug-out canoe.

For crossing rivers, the Australian savage simply goes to the nearest stringy-bark tree, chops a circle round the tree at the foot, and another seven or eight feet higher, makes a longitudinal cut on each side, and strips off bark enough by this means to make two canoes. If he is only going to cross the river by himself, he simply ties the bark together at the ends, paddles across, and abandons the piece of bark on the other side, knowing that he can easily provide another. If it is to carry another besides himself, he stops up the tied ends with clay; but if it is to be permanently employed, he sews up the ends more carefully, and keeps it in shape by cross-pieces, thereby producing a vessel which closely resembles the bark canoe of

North America. I have not been able to trace the use of the bark canoe further north than Australia on this side of the world, probably owing to its being ill adapted for sea navigation; nor do I find representatives of it in any part of Europe or Africa, although bark is extensively used, in the Polynesian Islands and elsewhere, for other purposes.

It is the two continents of America which must be regarded as the home of the bark canoe.

The Fuegian canoe has been described by Wilkes, Pritchard, and others. It is sewn with shreds of whalebone, sealskin, and twigs, and supported by a number of stretchers lashed to the gunwale; the joints are stopped with rushes, and, without, smeared with resin. In Guiana the canoe is made of the bark of the purple-heart tree, stripped off and tied together at the ends. The ends are stopped with clay, as with the Australians. This mode of caulking is not very effectual, however, and the water is sure to come in sooner or later.

The nature of the material does not admit of much variety in the construction; suffice it to say that it is in general use in North America, up to the Esquimaux frontier. Its value in these regions consists in the facility with which it is taken out of the water and carried over the numerous rapids that prevail in the North American rivers. The Algonquins were famous for the construction of them. Some carry only two people, but the *canot de maître* was thirty-six feet in length, and required fourteen paddlers. Kalm, in 1747, gives a detailed account of the construction of them on the Hudson river, and Lahontan, in 1684, gives an equally detailed description of those used in Canada. The bark is peeled off the tree by means of hot water. They are very fragile, and every day some hole in the bottom has to be stopped with gum. . . . .

IV. CANOES OF WICKER AND SKIN

As we approach the Arctic regions, the dug-out and bark canoes are replaced by canoes of skin and wicker. As we have already seen, in the case of the bow, and other arts of savages, vegetable materials supply the wants of man in southern and equatorial regions, whilst animal materials supply their place in the north.

The origin of skin coverings has been already suggested when speaking of bark canoes. The accidental dropping of a skin bottle into the water might suggest the use of such vessels as a means of recovering the harpoon, which, as I have already shown elsewhere, was almost universally used for fishing in the earliest stages of culture. The Esquimaux lives with the harpoon and its attached bladder almost continually by his side. The Esquimaux *kayak,* Nos. 1253 and 1254 of my collection, in which he traverses the ocean, although admirable in its workmanship, and, like all the works of the Esquimaux, ingenious in construction, is in principle nothing more than a large, pointed bladder, similar to that which is lashed to the harpoon at its side; the man in this case occupying the opening which, in the bladder, is filled by the wooden pin that serves for a cork.

This is, I believe, a very primitive form of vessel, although there can be no doubt that many links in the history of its development have been lost. Unlike the dug-out canoe, such a fragile contrivance as the wicker canoe perishes quickly, and no direct evidence of its ancestry can be traced at the present time. It is only by means of survivals that we can build up the past history of its development; and these are, for the most part, wanting.

The skin of an animal, flayed off the body with but one incision, served, as I have elsewhere shown, a variety of purposes: from it the bellows was derived, the bagpipes, water-vessels, and pouches of various kinds; and, filled with air, it served the purpose of a float. Steinitz, in his *History of the Ship,* gives an illustration of an inflated ox skin, which in India is used to cross rivers; the owner riding upon the back of the animal and paddling with his hands, as if it had been a living ox.

In the Assyrian sculptures there are numerous illustrations representing men floating upon skins of this kind, which they clasp with the left hand, like the tree trunks, already mentioned, that are used by the American Indians, and swim with the right. Layard says this manner of crossing rivers is still practised in Mesopotamia. He also describes the raft, composed of a number of such floats, made of the skins of sheep flayed off with as few incisions as possible; a square framework of poplar

beams is placed over a number of these, and tied together with osier and other twigs. The mouths of the sheep-skins are placed upwards, so that they can be opened and refilled by the raft-men. On these rafts the merchandise is floated down the river to Bagdad; the materials are then disposed of and the skins packed on mules, to return for another voyage. On the Nile similar rafts are used, the skins being supplanted by earthen pots, which, like the skins on the Euphrates, serve only a temporary purpose, and after the voyage down the river are disposed of in the bazaars.

This mode of floating upon skins I should conjecture to be of northern origin, and to be practised chiefly by nomadic races; but we find it employed on the Morbeya, in Morocco, by the Moors, who no doubt had it from the East. It is thus described by Lempriere, in 1789. A raft is formed of eight sheep-skins filled with air, and tied together with small cords; a few slender poles are laid over them, to which they are fastened, and that is the only means used at Buluane to convey travellers, with their baggage, over the river. As soon as the raft is loaded, a man strips, jumps into the water, and swims with one hand, whilst he pulls the raft after him with the other; another swims and pushes behind. This reminds us of the custom of the Gran Chaco Indians of South America, who, in crossing rivers, use a square boat or tub of bull's hide, called *pelota*. It is attached by a rope to the tail of a horse, which swims in front; or the rope is taken in the mouth of an expert swimmer. . . . .

V. RAFTS

The trunks of trees, united by mutual attraction, as they floated down the stream, would suggest the idea of a raft. The women of Australia use rafts made of layers of reeds, from which they dive to obtain mussel-shells. In New Guinea the catamaran, or small raft formed of three planks lashed together with rattan, is the commonest vessel used. Others are larger, containing ten or twelve persons, and consist of three logs lashed together in five places, the centre log being the longest, and projecting at both ends.

This is exactly like the catamaran used on the coast of Madras, a model of one of which is in the Indian Museum; they are also used on the Ganges, and in the Asiatic isles. At Manilla

they are known by the name of *saraboas;* but the perfection of raft navigation is on the coast of Peru. Ulloa, in 1735, describes the *balzas* used on the Guayaquil, in Ecuador, and on the coast as far south as Paita. They are called by the Indians of the Guayaquil *jungadas,* and by the Darien Indians *puero.* They are made of a wood so light that a boy can easily carry a log 1 foot in diameter and 3 or 4 yards long. They are always made of an odd number of beams, like the New Guinea and Indian rafts, the longest and thickest in the centre, and the others lashed on each side. Some are 70 ft. in length and 20 broad. When sailing, they are guided by a system of planks, called *guaras,* which are shoved down between the beams of different parts of the raft as they are wanted, the breadth of the plank being in the direction of the lines of the timbers. By means of these they are able to sail near the wind, and to luff up, bear away, and tack at pleasure. When a *guara* is put down in the fore part of the raft, it luffs up, and when in the hinder part, it bears away. This system of steering, he says, the Indians have learnt empirically, 'their uncultivated minds never having examined into the *rationale* of the thing.'

It was one of these vessels which Bartholomew Ruiz, pilot of the second expedition for the discovery of Peru, met with; and which so astonished the sailors, who had never before seen any vessel on the coast of America provided with a sail. Condamine speaks of the rafts in 1743, on the Chinchipe, in Peru. They are also used on the coast of Brazil, where they are also called *jungadas,* from which locality there is a model of one in the British Museum, and another in the Christy collection. Professor Wilson thinks it was by means of these vessels, driven off the coast of America westward, that the Polynesian and Malay islands were peopled; and this brings us to the consideration of the peculiar class of vessel which is distributed over a continuous area in the Pacific and adjoining seas, viz. the outrigger canoe, which, I shall endeavour to show, was derived from the raft.

VI. OUTRIGGER-CANOES

The sailing properties of the *balza,* or any other similar raft, must have been greatly impeded by the resistance offered to the water by the ends of its numerous beams. In order to diminish

the resistance, the obvious remedy was to use only two beams, placed parallel to each other at a distance apart, with a platform laid on cross-poles between them.

Of this kind we find a vessel used by the Tasmanians, and described by Mr. Bonwick, on the authority of Lieut. Jeffreys. The natives, he says, would select two good stems of trees and place them parallel to each other, but a couple of yards apart; cross-pieces of small size were laid on these, and secured to the trees by scraps of tough bark. A stronger cross-timber, of greater thickness, was laid across the centre, and the whole was then covered by wicker-work. Such a float would be thirty feet long, and would hold from six to ten persons.

In Fiji, Williams describes a kind of vessel called *ulatoka*, a raised platform, floating on two logs, which must evidently be a vessel of the same description as that used in Tasmania.

From these two logs were derived the double canoe on the one hand, and the canoe with the outrigger on the other. . . . .

VII. RUDDERS, SAILS, AND OTHER CONTRIVANCES

All the various items of evidence which I have collected, and endeavoured to elucidate by means of survivals, whether in relation to modes of navigation or other branches of industry, appear to me to tend towards establishing a gradual development of culture as we advance northward. Although Buddhism and its concomitant civilization may have come from the north, there has been an earlier and prehistoric flow of culture in the opposite direction—northward—from the primaeval and now submerged cradle of the human family in the southern hemisphere. This, I venture to think, will establish itself more and more clearly, in proportion as we divest ourselves of the numerous errors which have arisen from our acceptance of the Noachian deluge as a universal catastrophe.

As human culture developed northward from the equator toward the 40th parallel of latitude, civilization began to bud out in Egypt, India, and China, and a great highway of nations was established by means of ships along the southern margin of the land, from China to the Red Sea.

Along this ocean highway may be traced many connexions in ship forms which have survived from the earliest times. The

oculus, which, on the sacred boats of the Egyptians, represented the eye of Osiris guiding the mummy of the departed across the sacred lake, is still seen eastward—in India and China—converted into an ornamental device, whilst westward it lived through the period of the Roman and Grecian *biremes* and *triremes,* and has survived to this day on the Maltese rowing-boats and the *xebecque* of Calabria, or has been converted into a hawser-hole in modern European craft. The function of the rudder—which in the primitive vessels of the southern world is still performed by the paddlers, whilst paddling with their faces to the prow—was confided, as sails began to be introduced, to the rearmost oars. In some of the Egyptian sculptures the three hindermost rowers on each side are seen steering the vessel with their oars. Ultimately one greatly developed oar on each side of the stern performed this duty; the *loom* of which was attached to an upright beam on the deck, as is still the case in some parts of India. In some of the larger Malay *prahaus* there are openings or windows in the stern, considerably below the deck, by which the steersmen have access to two large rudders, one on each side; each rudder being the vestige of a side oar.

Throughout the Polynesian Islands the steering is performed with either one or two greatly developed paddles. Both in the rudder of the Egyptian sculptures and in the *gubernaculum* of the Roman vessels, we see the transition from the large double oar, one on each side, to the single oar at the stern. The ship of Ptolemaeus Philopator had four rudders, each thirty cubits in length. The Chinese and Japanese rudder is but a modification of the oar, worked through large holes in the stern of the vessel; which large holes, in the case of the Japanese, owe their preservation to the orders of the Tycoon, who caused them to be retained in all his vessels, in order to prevent his subjects from venturing far to sea. The *buccina,* or shell trumpet, which is used especially on board all canoes in the Pacific, from the coast of Peru to Ceylon, is represented, together with the *gubernaculum,* in the hands of Tritons, in Roman sculptures, and the shell form of it was preserved in its metallic representatives.

The sail, in its simplest form, consists of a triangular mat, with bamboos lashed to the two longer sides. In New Guinea

and some of the other islands, this sail, which is here seen it its simplest form, is simply put up on deck, with the apex downwards and the broad end up, and kept up by stays fore and aft. When a separate mast was introduced, this sail was hauled up by a halyard attached to one of the bamboos, at the distance of about one-fifth of its length from the broad end, the apex of the bamboo-edged mat being fastened forward by means of a tack. By taking away the lower bamboo the sail became the *lateen* sail of the Malay pirate *proa,* the singular resemblance of which to that of the Maltese galley of the eighteenth century (a resemblance shared by all other parts of the two vessels) may be seen by two models placed side by side in the Royal United Service Institution. Professor Wilson observes that the use of the sail appears to be almost unknown on either continent of America, and the surprise of the Spaniards on first seeing one used on board a Peruvian *balza* arose from this known peculiarity of early American navigation (p. 218). Lahontan, however, in 1684, says that the Canadian bark canoes, though usually propelled by paddles, sometimes carried a small sail. He does not, however, say whether the knowledge of these has been derived from Europeans. Mr. Lloyd also mentions small sails used with bark canoes in Newfoundland.

The *crow's-nest,* which in the Egyptian vessels served to contain a slinger or an archer at the top of the mast, and which is also represented in the Assyrian sculptures, was still used for the same purpose in Europe in the fifteenth century, was modified in the sixteenth century, and became the mast-head so well known to midshipmen in our own time. The two raised platforms, which in the Egyptian vessels served to contain the man with the fathoming pole in the fore part, and the steersman behind, became the *prora* and the *puppis* of the Romans, and the *forecastle* and *poop* of modern European vessels. The *aplustre,* which, in the form of a lotus, ornamented the stern of the Egyptian war-craft, gave the form to the *aplustre* of the Greeks and Romans, and may still be seen on the stern of the Burmese war-boats at the present time. . . . .—A. Lane-Fox Pitt-Rivers, *Jl. of the Anth. Inst.,* 4:399–435. Reprinted in *The Evolution of Culture,* 189–227.

INVENTION AND DISCOVERY

The material progress of mankind rests upon an ever-deepening and widening study of natural phenomena, from which results a corresponding increase in the wealth of means at a man's disposal for his own emancipation, and for the improvement and embellishment of his life. The discovery how to make fire by friction was an act of the intellect which in its own degree demanded as much thinking power as the invention of the steam-engine. The inventor of the bow or the harpoon must have been a genius, whether his contemporaries thought him one or not. And then as now, whatever intellectual gains were due to natural suggestions must have grown up in the individual intellect, in order, when circumstances were favourable, to make its way to the minds of several or many persons. Only suggestions of a lower, less developed kind, such as we may call quite generally tones of mind, appear like epidemics in many simultaneously, and are capable as it were of giving their tone to the mental physiognomy of a race. Intellectual gains are individual achievements, and the history of even the simplest discovery is a fragment of the intellectual history of mankind.

When primitive man was brought naked into the world, Nature came to meet him in two ways. She gave him the materials of food, clothing, weapons, and so forth, and offered him suggestions as to the most suitable methods of turning them to account. It is with these suggestions that we have now to concern ourselves. In invention, as in all that is spiritual in man, the external world, mirrored in his soul, plays a part. We cannot doubt that much has been taken from it. The agreement between type and copy seems very close when we find the tail of a gnu or eland used by the Bushmen of South Africa, just as it was by its first owner, to keep off the flies of that fly-abounding region; or when Peter Kolb relates how the Hottentots look only for such roots and tubers as are eaten by the baboons and other animals. When we come to consider the evolution of agriculture, we shall discover many other cases of similar suggestions; justifying us in the reflection that in the lower stages of culture man is nearer to the beast, learns from it more easily, and, similarly, has

a larger share of brute-instinct. Other discoveries go back to the earliest observations of the sequence of cause and effect; and with the course of discovery the beginnings of science also reach back to the earliest ages of mankind. Some natural occurrence strikes a man; he wishes to see it repeated, and is thus compelled to put his own hand to it. Thus he is led to inquire into the particulars of the occurrence and its causes.

But it is the individual alone who, in the first instance, makes the discovery and profits by it. More is required if it is to become an addition to the store of culture such as the history of culture can take into account. For the mode in which the acquisitions of the intellect are amassed is twofold. First, we have the concentrated creative force of the individual genius, which brings one possession after another into the treasury of mankind; and secondly, the diffusion of these among the masses, which is a preliminary condition of their preservation. The discovery which the individual keeps to himself dies with him; it can survive only if handed down. The degree of vitality possessed by discoveries depends, therefore, upon the force of tradition; and this again upon the internal organic interdependence of the generations. Since this is strongest in those classes who either have leisure or are led by their calling to attend to intellectual matters, even in their most primitive form, the force which tends to preserve what the intellect has won is also dependent on the social organisation. And lastly, since a store of intellectual possession has a stimulating effect upon creative minds, which would otherwise be condemned to be always beginning anew, everything which strengthens the force of tradition in a race will have a favourable effect upon the further development of its store of ideas, discoveries, inventions. Those natural conditions, therefore, may be regarded as indirectly most especially favourable to intellectual development, which affect the density of the whole population, the productive activity of individuals, and therewith the enrichment of the community. But the wide extension of a race and abundant possibilities of commerce are also operative in this direction. If we consider, not finding only, but the preservation of what has been found—by diffusion through a wide sphere and incorporation with the permanent stock of culture,—is es-

sential to invention, we shall comprehend that this element of invention, so important for progress, will not attain an equally effective character in all stages of civilization. Everything tends to limit its effectiveness in the lower stages, for the lower we go in civilization, the less is the interdependence of men kept up; and on the other hand, with the increasing interdependence of men the pace of culture is accelerated.

How many inventions of men may have been lost in the long ages before great communities were formed! Even to-day how many do we see fallen with their inventors into oblivion, or, in the most favourable case, laboriously dug up again and so preserved? And who can measure the inertia of the stubborn opposition which stands in the way of the birth of new ideas? We may remember Cook's description of the New Zealanders in the report of his second voyage: "The New Zealanders seem perfectly content with the scraps of knowledge which they possess, without showing the least impulse to improve upon them. Nor do they show any particular curiosity either in their questions or their remarks. Novelties do not surprise them as much as one would expect; nay, they do not hold their attention for an instant." We know now that on the remote Easter Island writing, the most important of inventions, was generally known. It seems to have died out there without leaving any offspring.

What a vista of eternally futile starts opens when we think of this mental immobility and this lack of quickening interdependence! We get a feeling that all the sweat which the struggle after new improvements has cost our age of inventions is but a drop in the ocean of labours wherein the inventors of primitive times were submerged. The germ of civilization will not grow in every soil. The bulk of civilized methods which a race is capable of assimilating is in direct proportion to its average of civilization. Anything that is offered to it beyond this is only received externally, and remains of no importance to the life of the race, passing as time goes on into oblivion or rigidity. . . . .

If we draw conclusions from certain acquisitions of culture which may be found among a people, such as garden plants, domestic animals, implements and the like, to its contact with some other people, we may easily forget this simple but im-

portant circumstance. Many institutions among the inhabitants of our mountains fail to betray the fact that they have lived for ages in the neighbourhood of a high civilization; the Bushmen have appropriated astonishingly little of the more copious store of weapons, implements, dexterity, possessed by the Bechuanas. On the one side the stock of culture progresses, on the other it retrogrades or stands still, a condition into which a movement, evidently in its nature not strong, easily passes. This is an instructive phenomenon, and a comparison of various degrees of this stationariness is specially attractive. Any one who starts with the view that pottery is a very primitive invention, less remote than almost any other from the natural man, will note with astonishment, not in Australia only but in Polynesia, how a talented race, in the face of needs by no means inconsiderable, manages to get along without that art. And when he finds it in existence only in Tonga and the smaller Easter Island at the extreme eastern limit of Polynesia, he will be apt to think how much more the intercourse between lands and islands has contributed to the enrichment of men's stock of culture than has independent invention. But that even here again intercourse is very capricious, we learn from the absence of this art among the Assiniboines of North America, next door to the Mandans, who excel in it. Here we learn that inventions do not spread like a prairie-fire, but that human will takes a hand in the game and not without caprice, indolently declines some things while all the more readily accepting others. The tendency to stand still at a stage that has been once reached is greater in proportion as the average of civilization is lower. You do just what is enough and no more. Just because the Polynesians were able to heat water by putting red-hot stones into it, they would never have proceeded to pottery without foreign aid. We must beware of thinking even simple inventions necessary. It seems far more correct to credit the intellect of "natural" races with great sterility in all that does not touch the most immediate objects of life. Migrations may also have given occasion for sundry losses, since the raw material often occurs only in limited quantity, and every great migration causes a rift in tradition. *Tapa* plays an important part among the Polynesians, but the Maoris lost the art of its manufacture.

In these lower stages of civilization the whole social life is much more dependent upon the rise or upon the loss of some simple invention than is the case in the higher. The nearer life stands to Nature, the thinner the layer of culture in which it is rooted, the shorter the fibres which it strikes down to the natural soil, the more comprehensive, the further-reaching every change in that soil naturally is. The invention of the way to manufacture clothing, whether in the form of woven stuffs or of beaten bark, is surely natural and yet rich in results. The entire refinement of existence among the natural races of Polynesia, resting upon cleanliness and modesty, and sufficient by itself to give them a high place, is inconceivable without the inconspicuous material known as *tapa*. Bark is converted into a stuff for clothing, which provides not only a plentiful covering for the body but also a certain luxury in the frequent change it allows, a certain taste in wearing and in the selection of colours and patterns, and, lastly, a means of amassing capital by preserving stores of this material which are always convertible. Think, on the other hand, of an Eskimo's skin coat or a Negress's leather apron, which are worn through successive generations and laden with the dirt of them. *Tapa*, a material which can be provided in quantities without much trouble, naturally represses the weaver's art, which can only have proceeded by a long and toilsome road from plaiting. In the lake-dwellings there are products which, with equal justice, are referred to both one and the other form of work. This suggests the relations between basket-weaving and pottery; large earthenware vessels were made by covering baskets with clay. There is no need on this account, with William H. Holmes, to call the whole art of pottery, as contrasted with plaiting, a "servile art," but this outgrowth is instructive.

The fact that the most necessary kinds of knowledge and dexterity are spread throughout mankind, so that the total impression of the stock of culture possessed by the "natural" races is one of a fundamental uniformity, gives rise to a further feeling that this scanty stock is only the remains of a larger total of possessions from which all that was not absolutely necessary has gradually dropped out. Or can we suppose that the art of producing fire by friction made its way all alone through the world, or the art

of making bows and arrows? To discuss these questions is important, not only in order to estimate the measure of the inventive talent possessed by natural races, but also to obtain the right perspective for the history of primitive humanity, for it must be possible to read in the stock of culture, if anywhere, from what elements and by what ways mankind of to-day has become what it is. Now if we pass in review what is possessed by the natural races in artifices, implements, weapons, and so on, and deduct what is and has been imported, in some cases already to a large extent, by means of trade with modern civilized races, we are inclined to form a high conception of their inventive talent. But what guarantee have we of the independent discovery of all these things? Undoubtedly before there were any relations with Europeans, relations existed with other races which reached down to these lower strata, and thus many a crumb must have fallen here from the richly spread tables of the old civilizations of Egypt, Mesopotamia, India, China, and Japan, and has continued here in a mutilated shape perhaps quite alien to the original uses served by it. The ethnographer knows cases enough of such borrowings; every single race shows examples of them. Nor is the examination of their nature and significance anything new. We may specially recall an original remark of Livingstone's which, though made with another intention, is fairly applicable here: "The existence of various implements which are in use among the Africans and other partially civilized races, points to the communication of an instruction which must have proceeded at some time or another from a superhuman being." Think as we may about the conclusion of this remark, its main point is fully justified as a contradiction of the widespread assumption that everything which natural races have to show of their own came into existence in the place where it is now seen, and was invented by those races themselves. When we find all races in Africa, from Moors to Hottentots, producing and working iron after one and the same method, it is far more probable that this art reached them all from a common source than that it was independently discovered in all parts alike. At one time people pointed triumphantly to the turkey as an animal which had been independently domesticated by barbarous races, until

Spencer Baird discovered in Mexico the ancestor of this ill-tempered sovereign of the poultry-yard. In the matter of utensils, borrowing from civilization is naturally more difficult to prove, since these do not, like plants and animals, bear about them, however obliterated, the marks of their origin. But may not the Indian, who got his maize from Mexico, have learnt from the same quarter the art of his delicate stone-work? Such introduction, together with its consequence of the widest possible propagation, must seem to us more natural than the independent invention of one and the same utensil, or one and the same touch of art in a dozen different places. Attention has been quite recently called to the fact that the Solomon Islanders have bows and arrows, while the inhabitants of New Zealand and others in the neighbourhood have not, and people were quite ready to credit the former with the invention of this ingenious weapon. As has been already pointed out, people are, in this matter, wonderfully inconsistent. On the one hand the natural races are put down to the level of the brute, on the other hand inventions are ascribed to them which are, at least, not of an easy kind. One is always too apt to think of invention as easy, considering only the difficulties of finding out, which for a brain of genius are small; but it is otherwise with the retaining of what has been found out. In some cases it has been possible to penetrate down to the more remote origin of apparently quite spontaneous productions of "natural" races. Bastian has compiled a list of cases in which certain elements of European civilization have been formally imitated; a good instance being the characteristic Fijian form of club copied from a musket of the last century. The savages thought they would have to have the dreaded weapon at least in wood, and produced a club remarkably ill-adapted to its proper purpose. A head-dress used in the New Hebrides is a colossal exaggeration of an admiral's cocked-hat. The remarkable cross-bow used by the Fans is more to the purpose. It reached the Fans of the interior from the Portuguese discoverers on the west coast, and they retained the pattern, while on the coast firearms came into use, as in Europe. Now, after four hundred years, the cross-bow turns up again; but as the Fans have neither the patience nor the tools to fashion a lock,

they slit the stock, and use the cross-bow to shoot little poisoned arrows which might just as well be shot from a light long-bow.

If it were less difficult to seize the manifestations of intellectual life among the lower races, we should be able to gather a much richer harvest among them. Indian traces run through the religion of the Malays and extend perhaps to Melanesia and Polynesia. We find such striking similarities, especially in the cosmogonic legends of Bushmen and Australians, Polynesians, and North Americans, that nothing but borrowing is left to explain them. So in the domain of politics we find points of accord. The institutions of Kazembe's country, as described by Lacerda and Livingstone, or Muata Jamvo's, as reported by Pogge and Buchner, remind us partly of India, partly of ancient Egypt. In the domain of social and political conceptions and institutions, the coincidences are striking. The deeper we search into these matters, the more convinced we are of the correctness of an expression used by Bastian at a date when the sharp division of races was a gospel, and the unity of mankind was scouted. In his *Journey to San Salvador* he says: "Even to the islands slumbering on the bosom of the Pacific, ocean-currents seem to have driven the message of the more abstract triumphs of civilization; perhaps even to the shores of the American continent." We may be permitted to add the conclusion that no one understands the natural races who does not make due allowance for their intercourse and connection, often disguised as it is, with each other, and with civilized peoples. There is, and always has been, more intercourse between them than we would suppose from a superficial observation. Thus, long before the Nile route was opened to traffic, wares of European origin, especially pearls, made their way from Darfour by Hofrat el Nahas, even to the Azandeh. Where strong resemblances occur, the question of intercourse, of communication from abroad, should always be raised in the first instance; in many cases possibly that of very direct intercourse. We think that we are quite justified in asking whether it is not by fugitive slaves that so many elements of African civilization have been spread through South America. For centuries the Japanese have had very little intercourse with the races of the North Pacific; yet it may be that we ought to

refer to some such intercourse as this (which, in truth, not only enlarges, but, as time goes on, always tends to decompose) the wicker armour worn by the Chukchis, so like Japanese armour. Thus, however, races formerly depended on each other; and no more than at present was there ever on this earth, so far as our historical knowledge shows, a group of men who could be said to be devoid of relations with others. Everywhere we see agreements, similarities, affinities, radiating out till they form a close network over the earth; even the most remote islanders can only be understood when we take into account their neighbours, far and near.

These most remote islands, too, show how indigenous industries always dwindle where European or American manufactures come. When Hamilton visited Car Nicobar in 1790, the women wore a kind of short petticoat, made of tufts of grass or rushes strung in a row, which simply hung down; now they universally cover up their bodies with stuff cloths. Thus a century's progress has resulted in the replacing of the grass petticoat by woven materials. Meanwhile, the domestic industry perishes, and no new dexterity arises in its stead. On the lower Congo we no longer find the bark-stuffs and fine webs which Lopez and other travellers of the sixteenth century prized so highly. Where, too, is the art of polishing gems and obsidian, which produced such conspicuous results in ancient Mexico? or the goldsmith's work and tapestry of the old Peruvians?

For estimating the importance of external suggestion, nothing is more instructive than the consideration of races which are poorest in an ethnographical sense. Of them we can say that they are invariably also those whose intercourse with others is scantiest. Why are the most remote races at the extremities of the continents or on the less accessible islands the most destitute? Ethnographic poverty is only in part a consequence of the penury, the general poverty, which presses on a people. This has been readily recognised in the case of many races, as, for instance, the Australians, whose life on the arid steppes of their continent, almost destitute of useful plants and animals, is one of the poorest and most depressed that has been allotted to any race on the earth. But even in the most favoured northern tracts

within the tropics, they are almost totally devoid of that tendency to the artistic adornment of existence which flourishes so profusely among their Papuan neighbours, and forms the luxury of barbarous races. In this case we need not seek far for the causes of their ethnographical poverty. Every glance at the conditions and mode of these people's life shows how sharp is their struggle to maintain bare existence, but it also shows the impoverishing effects of remoteness from the great streams of traffic. The out-of-the-way situation of Australia, southern South America, the interior of South Africa, and eastern Polynesia, exercises the same impoverishing influence everywhere upon the indigenous races. If any one is inclined to see in this a sort of contagion of poverty, referable to the smaller number of suggestions offered under these conditions by Nature to the mind, and especially to the fancy, he must beware of hasty conclusions. Easter Island, though small, and by nature poor, is ethnographically rich; and hardly any barbarous race is superior in artistic development to the Eskimo.

We know how the utensils and weapons of civilized races have spread as it were by stages and continue to spread to races which previously possessed no notion of them. When Stanley crossed the Dark Continent, on his first remarkable journey along the Congo, the last point where firearms were seen in native hands was left on the east at the famous market-town of Nyangwe. He came upon them again to the westward at Nbenga, 6° north of Nyangwe, in the shape of those four old Portuguese muskets, ever to be historical as the first sign from which the party learned, at the most critical moment of their journey, "that we had not missed the way, and that the great stream really reached the sea." Nyangwe and Nbenga are on the borders of an area of 200,000 to 250,000 square miles wherein firearms, with which the coasts of Africa have roared these four hundred years, were a few years ago unknown. It is true that other things have been more quickly diffused, as for instance those American products which were not brought here till the sixteenth century—tobacco, maize, and potatoes. But they too have travelled by stages; the Damaras have only come to know tobacco within the last few dozen years.—F. Ratzel, *History of Mankind*, 1:76–84.

In Part II we saw that the formal education of the savage child was concerned mainly with the development of his character. The serious and protracted attempt of the old men of the Australians to render the youth *ertwa, murra, oknirra* (man, good, very) was not only remarkably successful but embodied a very respectable ideal. And this insistence on a moral life is dominant in the educational systems of all savages. The North American Indians, especially, had developed a noble conception of personal character and an elaborate symbolism for impressing it on the young men. In this connection I may call attention to the following passage from Miss Fletcher's "The Hako: A Pawnee Ceremony" (*Report of the Bureau of American Ethnology, 22*:365):

"There is one aspect of the ritual, essential to its understanding, that was carefully explained by the Kúrahus, and the substance of many conversations on the subject follows. A man's life is an onward movement. If one has within him a determined purpose and seeks the help of the powers his life will 'climb up.' Here the Kúrahus made a gesture indicating a line slanting upward; then he arrested the movement and, still holding his hand where he had stopped, went on to say that as a man is climbing up he does something that marks a place in his life where the powers have given him the opportunity to express in acts his peculiar endowments, so this place, this act, forms a stage in his career, and he takes a new name to indicate that he is

on a level different from that which he occupied previously. Some men, he said, can rise only a little way, others live on a dead level, and he illustrated his words by moving his hands horizontally. Men having power to advance, climb step by step, and here again he made his idea plain by a gesture picturing a slant, then a level, a slant and a level. In this connection he called attention to the words, in line 1359, 'rutúrahwitz pari,' 'to overtake walking,' saying that the people who desire to have a name, or to change their name, must strive to overtake in the walk of life an upper level, such a one as these ancient men spoken of in the ritual had reached, where they threw away the names by which they had been known before. 'Rutúrahwitz pari' is a call to the Pawnees, bidding them emulate these men and overtake them by the doing of like deeds."

The defect of this educational system, like that of our own system so long as it remained exclusively a moral discipline, was the absence of any considerable and exact body of knowledge.

Furthermore the whole attempt of the savage to control the outside world, so far as it contained a theory or doctrine, was based on magic. This is especially well illustrated in the selection from Frazer in Part VI, and I have alluded to it in the introductory chapter. Where civilized man controls through science the savage attempted to control through magic. He paid as much attention to his magic as we pay to our science, but in doing so he wasted his attention.

In this state of affairs mechanical invention has a peculiar importance. The group solidarity of early man, secured through moral teaching, was hardly more complete than the gregarious organization of some ani-

mals, and his magic was a positive loss. But in mechanical invention he had the experimental method of modern science. And there is no doubt that primitive man's inventions raised him above the brutes just as our science constitutes our main superiority to the lower races. For the physical feebleness of man is conspicuous in comparison with the size and strength of many animals, and his subjugation of the animal world is a matter which cannot cease to engage our admiration. "The personal power of man to obtain the means of subsistence is exceedingly limited. His physical form is poorly adapted to the performance of those acts by which alone the resources of the earth are to be increased. With neither the wings of the eagle nor the fleetness of the hound, he finds himself soon outstripped by the grouse and the hare. With neither gills nor fins he is readily evaded by the inhabitants of the water. Destitute of appropriate weapons of offense, he finds himself no match for many of the animals which he would gladly kill for food. Unprovided with claws for digging the ground, he cannot burrow for safety either from his enemies or from the elements. Unfitted, as he is, for periodical migration for the purpose of escaping extremes of temperature, and yet frequently compelled to change his habitat in consequence of the rapid increase in his numbers which soon renders food scarce in any one locality, he finds himself in danger of being dashed against Scylla whenever he seeks to avoid Charybdis. With all these limitations upon his existence and progress, there remained but one hope for him and this lay through invention" (Professor Lester F. Ward, *Dynamic Sociology,* 1:548).

On its subjective side Part III may be regarded as a

continuation of Part II. Pp. 359–66, especially, deal with the formation of abstract conceptions and systems. An attentive reading of the selections from Mason and Pitt-Rivers reveals the most acute attention on the part of primitive man to the details of his environment and a marvelous ingenuity in taking advantage of them. It also confirms the view expressed in Part II that his mental organization is not defective. If we make due allowance for the low state of knowledge and the paucity of materials we must admit that his ingenuity and interest are of absolutely the same pattern as those of the modern scientist or inventor.

The whole of Mason's book, *The Origins of Invention,* should be read, and additional titles on primitive invention will be found in his footnotes. I particularly wished to include here his paper on the *Traps of the Ameriinds,* listed below, but considerations of space prevented it.

1 ABBOTT, C. C. *Primitive Industry: Illustrations of the Handiwork in Stone, Bone and Clay of the Native Races of the Atlantic Seaboard of America.* Salem, Mass., 1881.

*2 ANDREE, RICHARD. *Die Metalle bei den Naturvölkern mit Berücksichtigung prähistorischer Verhältnisse.* Leipzig, 1884.

*3 BALFOUR, H. "On the Structure and Affinities of the Composite Bow," *Jour. Anth. Inst.*, 19:220–50.

4 BANDELIER, A. "On the Art of War and Mode of Warfare of the Ancient Mexicans," *Peabody Mus. Arch. and Ethn., Rep.*, 10:95–159.

*5 BECK, L. *Die Geschichte des Eisens in technischer und kulturgeschichtlicher Beziehung.* Braunschweig, 1881–1903. 5 v.

6 BOEHMER, G. H. "Prehistoric Naval Architecture of the North of Europe," *U. S. Nat. Mus., Ann. Rep.* for 1891:527–647.

7 BORDIER, A. "Toxicologie primitive," *Rev. mensuelle de l'école d'anth.*, 3:301–15.

8 BOURKE, J. G. "Primitive Distillation among the Tarascoes," *Amer. Anth.*, 6:65–69.

9 BOURKE, J. G. "Distillation by Early American Indians," *Amer. Anth.*, 7:297–99.

10 CODRINGTON, R. H. "On Poisoned Arrows in Melanesia," *Jour. Anth. Inst.*, 19:215–19.

11 COWPER, H. S. *The Art of Attack.* Ulverston, 1906.

*12 CUSHING, F. H. "The Arrow," *Amer. Anth.*, 8:307–49.

[Announced "To be continued," but not completed.]

13 DORSEY, J. O. "Omaha Dwellings, Furniture, and Implements," *Bur. Amer. Ethn., Ann. Rep.*, 13:306–27.

161–75.

14 ESCHER, R. "Erfinden und Erfinder," *Zeit. f. Socialwissenschaft*, 2:

15 ESPINAS, A. V. *Les origines de la technologie.* Paris, 1897.

17 FRIEDERICI, G. "Die Wirkung des Indianerbogens," *Globus*, 91:325–30.

18 Happ, E. *Grundlinien einer Philosophie der Technik.* Braunschweig, 1878.

19 Hedinger, A. "Zur Frage der ältesten Methode der Feuererzeugung," *Archiv f. Anth.*, 25:165–70.

*20 Holmes, W. H. "Order of Development of the Primal Shaping Arts," *Smithsonian Inst., Ann. Rep.* for 1901:501–13.

*21 Holmes, W. H. "The Natural History of Flaked Stone Implements," *Internat. Cong. of Anth., Mem.*, 120–39.

*22 Holmes, W. H. "The Tomahawk," *Amer. Anth.*, N. S., 10:264–76.

*23 Hough, W. "Aboriginal Fire-Making," *Amer. Anth.*, 3:359–71.

*24 Hough, W. "The Methods of Fire-Making," *Smithsonian Inst., Ann. Rep.* for 1890:395–409.

*25 Hough, W. "Primitive American Armor," *U. S. Nat. Mus., Ann. Rep.* for 1893:625–51.

26 Hough, W. "The Pulque of Mexico," *U. S. Nat. Mus., Proc.*, 33: 577–92.

27 Hough, W. "The Development of Illumination," *Smithsonian Inst., Ann. Rep.* for 1901:493–500.

28 Johnston, Sir H. *George Grenfell and the Congo,* "Arts and Industries," 2:798–813.

29 Karutz, Dr. "Der Stand der Bogen- und Pfeilforschung," *Globus,* 76:380–89.

*30 Lippert, J. *Kulturgeschichte der Menschheit,* "Die Zähmung des Feuers," 1:250–79; "Die Fortschritte des Werkzeugs als Waffe," 1: 280–312; "Ausblick auf die Entwickelung differenzierter Geräte," 1:313–45.

*31 McGuire, J. D. "Classification and Development of Primitive Implements," *Amer. Anth.*, 9:227–36.

*32 McGuire, J. D. "On the Evolution of the Art of Working in Stone," *Amer. Anth.*, 6: 307–19.

*33 McGuire, J. D. "A Study of Primitive Methods of Drilling," *U. S. Nat. Mus., Ann. Rep.* for 1894:623–756.

*34 Mason, O. T. *Origins of Invention* ("Contemp. Sci." Ser.). London, 1895. [The best book on the subject.]

35 Mason, O. T. "Resemblances in Arts Widely Separated," *Am. Naturalist,* 20:246–51.

*36 Mason, O. T. "Aboriginal American Mechanics," *Internat. Cong. of Anth., Mem.*, 69–83.

37 MASON, O. T. "The Birth of Invention," *Smiths. Inst., Ann. Rep.* for 1892:603–11.

*38 MASON, O. T. "Aboriginal American Zoötechny," *Amer. Anth.*, N. S., 1:45–81.

*39 MASON, O. T., AND OTHERS. "Arrows and Arrow-Makers: A Symposium," *Amer. Anth.*, 4:45–74.

[MASON, O. T., "Introduction," 45–49; HOLMES, W. H., "Manufacture of Stone Arrow Points," 49–58; WILSON, T., "Forms of Ancient Arrow Heads," 58–60; HOUGH, W., "Arrow Feathering and Pointing," 60–63; FLINT, W., "The Arrow and Modern Archery," 63–67; HOFFMAN, W. J., "Poisoned Arrows;" BOURKE, J. G., "Folk-Lore Concerning Arrows," 67–71.]

*39a MASON, O. T. "Traps of the Amerinds," *Am. Anth.*, N. S., 2:657–75.

40 MASON, O. T. "Traps of American Indians—A Study in Psychology and Invention," *Smithsonian Inst., Ann. Rep.* for 1901: 461–73.

*41 MASON, O. T. "North American Bows, Arrows, and Quivers," *Smithsonian Inst., Ann. Rep.* for 1893:631–79.

42 MASON, O. T. "The Man's Knife among the North American Indians," *U. S. Nat. Mus., Ann. Rep.* for 1897:725–45.

43 MASON, O. T. "The Ulu or Woman's Knife of the Eskimo," *U. S. Nat. Mus., Ann. Rep.* for 1890:411–16.

44 MASON, O. T. "Aboriginal American Harpoons: A Study in Ethnic Distribution and Invention," *U. S. Nat. Mus., Ann. Rep.* for 1900: 189–304.

45 MASON, O. T. "Aboriginal Skin-dressing," *U. S. Nat. Mus., Ann. Rep.* for 1889:553–89.

46 MASON, O. T. "A Primitive Frame for Weaving Narrow Fabrics," *U. S. Nat. Mus., Ann. Rep.* for 1899:485–510.

48 MASON, O. T. "The Technic of Aboriginal American Basketry," *Amer. Anth.*, N. S., 3:109–28.

*49 MASON, O. T. "Primitive Travel and Transportation," *U. S. Nat. Mus., Ann. Rep.* for 1894:237–593.

*50 MASON, O. T. "Beginnings of the Carrying Industry," *Amer. Anth.*, 2:21–46.

51 MASON, O. T. "Pointed Bark Canoes of the Kutenai and Amur," *U. S. Nat Mus., Ann. Rep.* for 1899:532–37.

52 MASON, O. T. "The Human Beast of Burden," *U. S. Nat. Mus., Ann. Rep.* for 1887:237–95.

53 MEYER, H. "Bows and Arrows in Central Brazil," *Smithsonian Inst., Ann. Rep.* for 1896:549–82.

55 MORTILLET, G. "Empoisonnement des armes," *Rev. mensuelle de l'école d'anth.*, 1:97–106.

56 PEET, S. D. "The Earliest Constructed Dwellings and the Locality in Which Man Made His First Home," *Amer. Antiq.*, 22:85–100.

*57 POWELL, J. W. "Technology, or the Science of Industries," *Amer. Anth.*, N. S., 1:319–49.

*57*a* RAU, C. "Prehistoric Fishing in Europe and North America," *Smithsonian Contributions to Knowledge*, 25:1–342.

58 REULEAUX, F. "Technology and Civilisation," *Smithsonian Inst., Ann. Rep.* for 1890:705–19.

59 ROYCE, J. "The Psychology of Invention," *Psych. Rev.*, 5:113–44.

60 SPENCER, B., and GILLEN, F. J. *The Northern Tribes of Central Australia*, "Weapons and Implements," 633–82.

61 SPENCER, H. *Descriptive Sociology*, "Weapons—Implements," 1: 59–62; 2:66, 67; 3:56–59; 4:43–45; 5:54, 55; 6:51–53; 7:114–16; 8: 146–49.

62 STÜBEL, A., REISS, W., AND KOPPEL, B. *Kultur und Industrie südamerikanischer Völker.* Berlin, 1889–91. 2 v.

63 SKEAT AND BLAGDEN. *Pagan Races of the Malay Peninsula*, "Weapons and Implements," 1:242–337; "Arts and Crafts," 1:373–94.

64 SKERTCHLEY, S. B. J. "Borneo Traps," *Jour. Anth. Inst.*, 20:211–22.

65 THOMAS, N. W. "Australian Canoes and Rafts," *Jour. Anth. Inst.*, 35:56–79.

66 THOMAS, W. I. *Sex and Society*, "Sex and Primitive Industry," 123–48.

67 TYLOR, E. B. *Early History of Mankind*, "Fire, Cooking and Vessels," 229–74.

68 WACHTER, W. *Das Feuer in der Natur, im Kultus und Mythus, im Völkerleben.* Wien, 1904.

*69 WARD, L. F. *Psychic Factors of Civilization*, "The Inventive Faculty," 181–89; "Psychology of Invention," 190–95; "The Inventive Genius," 196–207.

*70 WARD, L. F. *Pure Sociology*, "The Conquest of Nature," 511–43.

71 WATKINS, J. E. "The Transportation and Lifting of Heavy Bodies by the Ancients," *Smithsonian Inst., Ann. Rep.* for 1898:615–19.

[For houses, pottery, textiles, basketry, see Bibliography of Part 5. For a further and more critical indication of American archaeology see end of Bibliography 8. For European prehistorics see Bibliography 13.]

PART IV
SEX AND MARRIAGE

SEX AND MARRIAGE

THE ORIGIN AND ANTIQUITY OF HUMAN MARRIAGE

. . . . We can no more stop within the limits of our own species, when trying to find the root of our psychical and social life, than we can understand the physical condition of the human race without taking into consideration that of the lower animals. I must, therefore, beg the reader to follow me into a domain which many may consider out of the way, but which we must, of necessity, explore in order to discover what we seek.

It is obvious that the preservation of the progeny of the lowest animals depends mainly upon chance. In the great subkingdom of the Invertebrata, even the mothers are exempted from nearly all anxiety as regards their offspring. In the highest orders, the Insects, the eggs are hatched by the heat of the sun, and the mother in most cases, does not even see her young. Her care is generally limited to seeking out an appropriate place for laying the eggs, and to fastening them to some proper object and covering them, if this be necessary for their preservation.

Again, to the male's share nothing falls, but the function of propagation.

In the lowest classes of the Vertebrata, parental care is likewise almost unheard of. In the immense majority of species, young fishes are hatched without the assistance of their parents, and have, from the outset, to help themselves. Many Teleostei form, however, an exception; and, curiously enough, it is the male on which, in these cases, the parental duty generally devolves. In some instances he constructs a nest, and jealously guards the ova deposited in it by the female; while the male of certain species of Arius carries the ova about with him in his capacious pharynx. Most of the Reptiles place their eggs in a convenient and sunny spot between moss and leaves, and take no further trouble about them. But several of the larger serpents have a curious fashion of laying them in a heap, and then coiling themselves around them in a great hollow cone. And

female Crocodiles, as also certain aquatic snakes of Cochin China, observed by Dr. Morice, carry with them even their young.

Among the lower Vertebrata it rarely happens that both parents jointly take care of their progeny. M. Milne Edwards states, indeed, that in the Pipa, or Toad of Surinam, the male helps the female to disburthen herself of her eggs; and the Chelonia are known to live in pairs. "La femelle," says M. Espinas, "vient sur les plages sablonneuses au moment de la ponte, accompagnée du mâle, et construit un nid en forme de four où la chaleur du soleil fait éclore les œufs." But it may be regarded as an almost universal rule that the relations of the sexes are utterly fickle. The male and female come together in the pairing time; but having satisfied their sexual instincts, they part again, having nothing more to do with one another.

The Chelonia form, with regard to their domestic habits, a transition to the Birds, as they do also from a zoological and, particularly, from an embryological point of view. In the latter class, parental affection has reached a very high degree of development, not only on the mother's side, but also on the father's. Male and female help each other to build the nest, the former generally bringing the materials, the latter doing the work. In fulfilling the numberless duties of the breeding season, both birds take a share. Incubation rests principally with the mother, but the father, as a rule, helps his companion, taking her place when she wants to leave the nest for a moment, or providing her with food and protecting her from every danger. Finally, when the duties of the breeding season are over, and the result desired is obtained, a period with new duties commences. During the first few days after hatching, most birds rarely leave their young for long, and then only to procure food for themselves and their family. In cases of great danger, both parents bravely defend their offspring. As soon as the first period of helplessness is over, and the young have grown somewhat, they are carefully taught to shift for themselves; and it is only when they are perfectly capable of so doing that they leave the nest and the parents.

There are, indeed, a few birds that from the first day of their ultra-oval existence lack all parental care; and in some species, as the ducks, it frequently happens that the male leaves family

duties wholly to the female. But, as a general rule, both share prosperity and adversity. The hatching of the eggs and the chief part of the rearing-duties belong to the mother, whilst the father acts as protector, and provides food, &c.

The relation of the sexes are thus of a very intimate character, male and female keeping together not only during the breeding season, but also after it. Nay, most birds, with the exception of those belonging to the Gallinaceous family, when pairing, do so once for all till either one or the other dies. And Dr. Brehm is so filled with admiration for their exemplary family life, that he enthusiastically declares that "real genuine marriage can only be found among birds."

This certainly cannot be said of most of the Mammals. The mother is, indeed, very ardently concerned for the welfare of her young, generally nursing them with the utmost affection, but this is by no means the case with the father. There are cases in which he acts as an enemy of his own progeny. But there are not wanting instances to the contrary, the connections between the sexes, though generally restricted to the time of the rut, being, with several species, of a more durable character. This is the case with whales, seals, the hippopotamus, the *Cervus campestris,* gazelles, the *Neotragus Hemprichii* and other small antelopes, rein-deer, the *Hydromus corpus,* squirrels, moles, the ichneumon, and some carnivorous animals, as a few cats and martens, the yaguarundi in South America, the *Canis Brasiliensis,* and possibly also the wolf. Among all these animals the sexes remain together even after the birth of the young, the male being the protector of the family.

What among lower Mammals is an exception, is among the Quadrumana a rule. The natives of Madagascar relate that in some species of the Prosimii, male and female nurse their young in common—a statement, however, which has not yet been proved to be true. The mirikina (*Nyctipithecus trivirgatus*) seems, according to Rengger, to live in pairs throughout the whole year, for, whatever the season, a male and a female are always found together. Of the *Mycetes Caraya, Cebus Azarae,* and *Ateles paniscus,* single individuals are very seldom, or never, seen, whole families being generally met with. Among the Arc-

topitheci, the male parent is expressly said to assist the female in taking care of the young ones.

The most interesting to us are, of course, the man-like apes. Diard was told by the Malays, and he found it afterwards to be true, that the young Siamangs, when in their helpless state, are carried about by their parents, the males by the father, the females by the mother. Lieutenant C. de Crespigny, who was wandering in the northern part of Borneo in 1870, gives the following description of the Orang-utan: "They live in families —the male, female, and a young one. On one occasion I found a family in which were two young ones, one of them much larger than the other, and I took this as a proof that the family tie had existed for at least two seasons. They build commodious nests in the trees which form their feeding-ground, and, so far as I could observe, the nests, which are well lined with dry leaves, are only occupied by the female and young, the male passing the night in the fork of the same or another tree in the vicinity. The nests are very numerous all over the forest, for they are not occupied above a few nights, the mias (or Orang-utan) leading a roving life." According to Dr. Mohnike, however, the old males generally live with the females during the rutting-season only; and Dr. Wallace never saw two full-grown animals together. But as he sometimes found not only females, but also males, accompanied by half-grown young ones, we may take for granted that the offspring of the Orang-utan are not devoid of all paternal care.

More unanimous are the statements which we have regarding the Gorilla. According to Dr. Savage, they live in bands, and all his informants agree in the assertion that but one adult male is seen in every band. "It is said that when the male is first seen he gives a terrific yell that resounds far and wide through the forest. . . . . The females and young at the first cry quickly disappear; he then approaches the enemy in great fury, pouring out his horrid cries in quick succession." Again, M. du Chaillu found "almost always one male with one female, though sometimes the old male wanders companionless;" and Mr. Winwood Reade states likewise that the Gorilla goes "sometimes alone, sometimes accompanied by his female and young one." The same traveller

was told that, when a family of Gorillas ascend a tree and eat a certain fruit, the old father remains seated at the foot of the tree. And when the female is pregnant, he builds a rude nest, usually about fifteen or twenty feet from the ground; here she is delivered, and the nest is then abandoned.

For more recent information about the Gorilla we are indebted to Herr von Koppenfells. He states that the male spends the night crouching at the foot of the tree, against which he places his back, and thus protects the female and their young, which are in the nest above, from the nocturnal attacks of leopards. Once he observed a male and female with two young ones of different ages, the elder being perhaps about six years old, the younger about one.

When all these statements are compared, it is impossible to doubt that the Gorilla lives in families, the male parent being in the habit of building the nest and protecting the family. And the same is the case with the Chimpanzee. According to Dr. Savage, "it is not unusual to see 'the old folks' sitting under a tree regaling themselves with fruit and friendly chat, while 'their children' are leaping around them and swinging from branch to branch in boisterous merriment." And Herr von Koppenfells assures us that the Chimpanzee, like the Gorilla, builds a nest for the young and female on a forked branch, the male himself spending the night lower down in the tree.

Passing from the highest monkeys to the savage and barbarous races of man, we meet with the same phenomenon. With the exception of a few cases in which certain tribes are asserted to live together promiscuously—almost all of which assertions I shall prove further on to be groundless—travellers unanimously agree that in the human race the relations of the sexes are, as a rule, of a more or less durable character. The family consisting of father, mother, and offspring, is a universal institution, whether founded on a monogamous, polygynous, or polyandrous marriage. And, as among the lower animals having the same habit, it is to the mother that the immediate care of the children chiefly belongs, while the father is the protector and guardian of the family. Man in the savage state is generally supposed to be rather indifferent to the welfare of his wife and children, and

this is really often the case, especially if he be compared with civilized man. But the simplest paternal duties are, nevertheless, universally recognized. If he does nothing else, the father builds the habitation, and employs himself in the chase and in war.

Thus, among the North American Indians, it was considered disgraceful for a man to have more wives than he was able to maintain. Mr. Powers says that among the Patwin, a Californian tribe which ranks among the lowest in the world, "the sentiment that the men are bound to support the women—that is, to furnish the supplies—is stronger even than among us." Among the Iroquois it was the office of the husband "to make a mat, to repair the cabin of his wife, or to construct a new one." The product of his hunting expeditions, during the first year of marriage, belonged of right to his wife, and afterwards he shared it equally with her, whether she remained in the village, or accompanied him to the chase. Azara states that among the Charruas of South America, "du moment où un homme se marie, il forme une famille à part, et travaille pour la nourrir;" and among the Fuegians, according to Admiral Fitzroy, "as soon as a youth is able to maintain a wife, by his exertions in fishing or bird-catching, he obtains the consent of her relations." Again, among the utterly rude Botocudos, whose girls are married very young, remaining in the house of the father till the age of puberty, the husband is even then obliged to maintain his wife, though living apart from her.

To judge from the recent account of Herr Lumholtz, the paternal duties seem to be scarcely recognized by the natives of Queensland. But with reference to the Kurnai in South Australia, Mr. Howitt states that "the man has to provide for his family with the assistance of his wife. His share is to hunt for their support, and to fight for their protection." As a Kurnai once said to him, "A man hunts, spears fish, fights, and sits about." And in the Encounter Bay tribe the paternal care is considered so indispensable, that, if the father dies before a child is born, the child is put to death by the mother, as there is no longer any one to provide for it.

Among the cannibals of New Britain, the chiefs have to see that the families of the warriors are properly maintained, and

"should a man neglect his family," says Mr. Angas, "a mode of punishment very similar to one practised by school-boys amongst civilized nations is adopted." Speaking of the marriage of the Tonga Islanders, Martin remarks "A married woman is one who cohabits with a man, and lives under his roof and protection;" and in Samoa, according to Mr. Pritchard, "whatever intercourse may take place between the sexes, a woman does not become a man's wife unless the latter take her to his own house." In Radack, as we are informed by Chamisso, even natural children are received by the father into his house, as soon as they are able to walk.

The Rev. D. Macdonald states that, in some African tribes, "a father has to fast after the birth of his child, or take some such method of showing that he recognizes that he as well as the mother should take care of the young stranger." Certain Africans will not even go on any warlike expedition when they have a young child; and the South American Guaranies, while their wives are pregnant, do not risk their lives in hunting wild beasts. In Lado the bridegroom has to assure his father-in-law three times that he will protect his wife, calling the people present to witness. And among the Touaregs, according to Dr. Chavanne, a man who deserts his wife is blamed, as he has taken upon himself the obligation of maintaining her.

The wretched Rock Veddahs in Ceylon, according to Sir J. Emerson Tennent, "acknowledge the marital obligation and the duty of supporting their own families." Among the Maldivians, "although a man is allowed four wives at one time, it is only on condition of his being able to support them." The Nagas are not permitted to marry, until they are able to set up house on their own account. The Nairs, we are told, consider it a husband's duty to provide his wife with food, clothing, and ornaments; and almost the same is said by Dr. Schwaner with reference to the tribes of the Barito district, in the south-east part of Borneo. A Burmese woman can demand a divorce, if her husband is not able to maintain her properly. Among the Mohammedans, the maintenance of the children devolves so exclusively on the father that the mother is even entitled to claim wages for nursing them. And among the Romans, *manus* implied not only the wife's

subordination to the husband, but also the husband's obligation to protect the wife.

The father's place in the family being that of a supporter and protector, a man is often not permitted to marry until he has given some proof of his ability to fulfil these duties.

The Koyúkuns believe that a youth who marries before he has killed a deer will have no children. The aborigines of Pennsylvania considered it a shame for a boy to think of a wife before having given some proof of his manhood. Among the wild Indians of British Guiana, says Mr. Im Thurn, before a man is allowed to choose a wife he must prove that he can do a man's work and is able to support himself and his family. Among the Dyaks of Borneo, the Nagas of Upper Assam, and the Alfura of Ceram, no one can marry unless he has in his possession a certain number of heads. The Karmanians, according to Strabo, were considered marriageable only after having killed an enemy. The desire of a Galla warrior is to deprive the enemy of his genitals, the possession of such a trophy being a necessary preliminary to marriage. Among the Bechuana and Kafir tribes south of the Zambesi, the youth is not allowed to take a wife until he has killed a rhinoceros. In the Marianne Group, the suitor had to give proof of his bodily strength and skill. And among the Arabs of Upper Egypt, the man must undergo an ordeal of whipping by the relations of his bride, in order to test his courage. If he wishes to be considered worth having, he must receive the chastisement, which is sometimes exceedingly severe, with an expression of enjoyment.

The idea that a man is bound to maintain his family is, indeed, so closely connected with that of marriage and fatherhood, that sometimes even repudiated wives with their children are, at least to a certain extent, supported by their former husbands. This is the case among the Chukchi of North-Western Asia, the Sotho Negroes in Southern Africa, and the Munda Kols in Chota Nagpore. Further, a wife frequently enjoys her husband's protection even after sexual relations have been broken off. And upon his death, the obligation of maintaining her and her children devolves on his heirs, the wide-spread custom of a man marrying the widow of his deceased brother being, as we shall

see in a subsequent chapter, not only a privilege belonging to the man, but, among several peoples, even a duty. We may thus take for granted that in the human race, at least at its present stage, the father has to perform the same function as in other animal species, where the connections between the sexes last longer than the sexual desire.

In encyclopedical and philosophical works we meet with several different definitions of the word marriage. Most of these definitions are, however, of a merely juridical or ethical nature, comprehending either what is required to make the union legal, or what, in the eye of an idealist, the union ought to be. But it is scarcely necessary to say how far I am here from using the word in either of these senses. It is the natural history of human marriage that is the object of this treatise; and, from a scientific point of view, I think there is but one definition which may claim to be generally admitted, that, namely, according to which marriage is nothing else than a more or less durable connection between male and female, lasting beyond the mere act of propagation till after the birth of the offspring. This definition is wide enough to include all others hitherto given, and narrow enough to exclude those wholly loose connections which by usage are never honoured with the name of marriage. It implies not only sexual relations, but also living together, as is set forth in the proverb of the Middle Ages, "Boire, manger, coucher ensemble est mariage, ce me semble." And, though rather vague, which is a matter of course, it has the advantage of comprehending in one notion phenomena essentially similar and having a common origin.

Thus, as appears from the preceding investigation, the first traces of marriage are found among the Chelonia. With the Birds it is an almost universal institution, whilst, among the Mammals, it is restricted to certain species only. We observed, however, that it occurs, as a rule, among the monkeys, especially the anthropomorphous apes, as well as in the races of men. Is it probable, then, that marriage was transmitted to man from some ape-like ancestor and that there never was a time when it did not occur in the human race? These questions can-

not be answered before we have found out the cause to which it owes its origin.

It is obvious that where the generative power is restricted to a certain season, it cannot be the sexual instinct that keeps male and female together for months or years. Nor is there any other egoistic motive that could probably account for this habit. Considering that the union lasts till after the birth of the offspring, and considering the care taken of this by the father, we may assume that the prolonged union of the sexes is, in some way or other, connected with parental duties. I am, indeed, strongly of opinion that the tie which joins male and female is an instinct developed through the powerful influence of natural selection. It is evident that, when the father helps to protect the offspring, the species is better able to subsist in the struggle for existence than it would be if this obligation entirely devolved on the mother. Paternal affection and the instinct which causes male and female to form somewhat durable alliances, are thus useful mental dispositions, which, in all probability, have been acquired through the survival of the fittest.

But how, then, can it be that among most animals the father never concerns himself about his progeny? The answer is not difficult to find. Marriage is only one of many means by which a species is enabled to subsist. Where parental care is lacking, we may be sure to find compensation for it in some other way. Among the Invertebrata, Fishes, and Reptiles, both parents are generally quite indifferent as to their progeny. An immense proportion of the progeny therefore succumbs before reaching maturity; but the number of eggs laid is proportionate to the number of those lost, and the species is preserved nevertheless. If every grain of roe, spawned by the female fishes, were fecundated and hatched, the sea would not be large enough to hold all the creatures resulting from them. The eggs of Reptiles need no maternal care, the embryo being developed by the heat of the sun; and their young are from the outset able to help themselves, leading the same life as the adults. Among Birds, on the other hand, parental care is an absolute necessity. Equal and continual warmth is the first requirement for the development of the embryo and the preserva-

tion of the young ones. For this the mother almost always wants the assistance of the father, who provides her with necessaries, and sometimes relieves her of the brooding. Among Mammals, the young can never do without the mother at the tenderest age, but the father's aid is generally by no means indispensable. In some species, as the walrus, the elephant, the *Bos americanus*, and the bat, there seems to be a rather curious substitute for paternal protection, the females, together with their young ones, collecting in large herds or flocks apart from the males. Again, as to the marriage of the Primates, it is, I think, very probably due to the small number of young, the female bringing forth but one at a time; and among the highest apes, as in man, also to the long period of infancy. Perhaps, too, the defective family life of the Orang-utan, compared with that of the Gorilla and Chimpanzee, depends upon the fewer dangers to which this animal is exposed. For "except man," Dr. Mohnike says, "the Orang-utan in Borneo has no enemy of equal strength." In short, the factors which the existence of a species depends upon, as the number of the progeny, their ability to help themselves when young, maternal care, marriage, &c., vary indefinitely in different species. But in those that do not succumb, all these factors are more or less proportionate to each other, the product always being the maintenance of the species.

Marriage and family are thus intimately connected with each other: it is for the benefit of the young that male and female continue to live together. Marriage is therefore rooted in family, rather than family in marriage. There are also many peoples among whom true conjugal life does not begin before a child is born, and others who consider that the birth of a child out of wedlock makes it obligatory for the parents to marry. Lieutenant Holm states that, among the Eastern Greenlanders, marriage is not regarded as complete till the woman has become a mother. Among the Shawanese and Abipones, the wife very often remains at her father's house till she has a child. Among the Khyens, the Ainos of Yesso, and one of the aboriginal tribes of China, the husband goes to live with his wife at her father's house, and never takes her away till after the birth of a child. In Circassia, the bride and bridegroom are kept apart

until the first child is born; and among the Bedouins of Mount Sinai, a wife never enters her husband's tent until she becomes far advanced in pregnancy. Among the Baele, the wife remains with her parents until she becomes a mother, and if this does not happen, she stays there for ever, the husband getting back what he has paid for her. In Siam, a wife does not receive her marriage portion before having given birth to a child; whilst among the Atkha Aleuts, according to Erman, a husband does not pay the purchase sum before he has become a father. Again, the Badagas in Southern India have two marriage ceremonies, the second of which does not take place till there is some indication that the pair are to have a family; and if there is no appearance of this, the couple not uncommonly separate. Dr. Bérenger-Féraud states that, among the Wolofs in Senegambia, "ce n'est que lorsque les signes de la grossesse sont irrécusables chez la fianceé, quelquefois même ce n'est qu'après la naissance d'un ou plusieurs enfants, que la cérémonie du mariage proprement dit s'accomplit." And the Igorrotes of Luzon consider no engagement binding until the woman has become pregnant.

On the other hand, Emin Pasha tells us that, among the Mádi in Central Africa, "should a girl become pregnant, the youth who has been her companion is bound to marry her, and to pay to her father the customary price of a bride." Burton reports a similar custom as prevailing among peoples dwelling to the south of the equator. Among many of the wild tribes of Borneo, there is almost unrestrained intercourse between the youth of both sexes; but, if pregnancy ensue, marriage is regarded as necessary. The same, as I am informed by Dr. A. Bunker, is the case with some Karen tribes in Burma. In Tahiti, according to Cook, the father might kill his natural child, but if he suffered it to live, the parties were considered to be in the married state. Among the Tipperahs of the Chittagong Hills, as well as the peasants of the Ukraine, a seducer is bound to marry the girl, should she become pregnant. Again, Mr. Powers informs us that, among the Californian Wintun, if a wife is abandoned when she has a young child, she is justified by her friends in destroying it on the ground that it has no supporter. And among the Creeks, a young woman that

becomes pregnant by a man whom she had expected to marry, and is disappointed, is allowed the same privilege. . . . .

If it be admitted that marriage, as a necessary requirement for the existence of certain species, is connected with some peculiarities in their organism, and, more particularly among the highest monkeys, with the paucity of their progeny and their long period of infancy,—it must at the same time be admitted that, among primitive men, from the same causes as among these animals, the sexes in all probability kept together till after the birth of the offspring. Later on, when the human race passed beyond its frugivorous stage and spread over the earth, living chiefly on animal food, the assistance of an adult male became still more necessary for the subsistence of the children. Everywhere the chase devolves on the man, it being a rare exception among savage peoples for a woman to engage in it. Under such conditions a family consisting of mother and young only, would probably, as a rule, have succumbed.

It has, however, been suggested that, in olden times, the natural guardian of the children was not the father, but the maternal uncle. This inference has been drawn chiefly from the common practice of a nephew succeeding his mother's brother in rank and property. But sometimes the relation between the two is still more intimate. "La famille Malaise proprement dite—le Sa-Mandei,—" says a Dutch writer, as quoted by Professor Giraud-Teulon, "consiste dans la mère et ses enfants; le père n'en fait point partie. Les liens de parenté qui unissent ce dernier à ses frères et sœurs sont plus étroits que ceux qui le rattachent à sa femme et à ses propres enfants. Il continue même après son mariage à vivre dans sa famille maternelle; c'est là qu'est son véritable domicile, et non pas dans la maison de sa femme: il ne cesse pas de cultiver le champ de sa propre famille, à travailler pour elle, et n'aide sa femme qu'accidentellement. Le chef de la famille est ordinairement le frère aîné du côté maternel (le mamak ou avunculus). De par ses droits et ses devoirs, c'est lui le vrai père des enfants de sa sœur." As regards the mountaineers of Georgia, especially the Pshaves, M. Kovalevsky states that, among them, "le frère de la mère prend la place du père dans toutes

les circonstances où il s'agit de venger le sang répandu, surtout au cas de meurtre commis sur la personne de son neveu." Among the Goajiro Indians, the Negroes of Bondo, the Barea, and the Bazes, it is the mother's brother who has the right of selling a girl to her suitor. Touching the Kois, the Rev. John Cain says, "The maternal uncle of any Koi girl has the right to bestow her hand on any one of his sons, or any other suitable candidate who meets with his approval. The father and the mother of the girl have no acknowledged voice in the matter. A similar custom prevails amongst some of the Komâti (Vaiśya) caste." Among the Savaras in India, the bridegroom has to give a bullock not only to the girl's father, but to the maternal uncle; whilst among the Creeks, the proxy of the suitor asked for the consent of the uncles, aunts, and brothers of the young woman, "the father having no voice or authority in the business."

But such cases are rare. Besides, most of them imply only that the children in a certain way belong to the uncle, not that the father is released from the obligation of supporting them. Even where succession runs through females only, the father is nearly always certainly the head of the family. Thus, for instance, among the Australians, with whom the clan of the children is, as a rule, determined by that of the mother, the husband is, to quote Mr. Curr, almost an autocrat in his family, and the children always belong to his tribe. Nor is there any reason to believe that it was generally otherwise in former times. A man could not of course be the guardian of his sister's children if he did not live in close connection with them. But except in such a decidedly anomalous case as that of the Malays, just referred to, this could scarcely happen, as a general rule, unless marriages were contracted between persons living closely together. Nowadays, however, such marriages are usually avoided, and I shall endeavour later on to show that they were probably also avoided by our remote ancestors.

It might, further, be objected that the children were equally well or better provided for, if not the fathers only, but all the males of the tribe indiscriminately were their guardians. The supporters of the hypothesis of promiscuity, and even other sociologists, as for instance Herr Kautsky, believe that this really was the

case among primitive men. According to them, the tribe or horde is the primary social unit of the human race, and the family only a secondary unit, developed in later times. Indeed, this assumption has been treated by many writers, not as a more or less probable hypothesis, but as a demonstrated truth. Yet the idea that a man's children belong to the tribe, has no foundation in fact. Everywhere we find the tribes or clans composed of several families, the members of each family being more closely connected with one another than with the rest of the tribe. The family, consisting of parents, children, and often also their next descendants, is a universal institution among existing peoples. And it seems extremely probable that, among our earliest human ancestors, the family formed, if not the society itself, at least the nucleus of it. As this is a question of great importance, I must deal with it at some length.

Mr. Darwin remarks, "Judging from the analogy of the majority of the Quadrumana, it is probable that the early ape-like progenitors of man were likewise social." But it may be doubted whether Mr. Darwin would have drawn this inference, had he taken into consideration the remarkable fact that none of the monkeys most nearly allied to man can be called social animals.

The solitary life of the Orang-utan has already been noted. As regards Gorillas, Dr. Savage states that there is only one adult male attached to each group; and Mr. Reade says expressly that they are not gregarious, though they sometimes seem to assemble in large numbers. Both M. du Chaillu and Herr von Koppenfels assure us likewise that the Gorilla generally lives in pairs or families.

The same is the case with the Chimpanzee. "It is seldom," Dr. Savage says, "that more than one or two nests are seen upon the same tree or in the same neighbourhood; five have been found, but it was an unusual circumstance. They do not live in 'villages.' . . . . They are more often seen in pairs than in gangs. . . . . As seen here, they cannot be called gregarious." This statement, confirmed or repeated by M. du Chaillu and Professor Hartmann, is especially interesting, as the Chimpanzee resembles man also in his comparatively slight strength and courage, so that a gregarious life might be supposed to be better suited to this animal.

Mr. Spencer, however, has pointed out that not only size, strength, and means of defence, but also the kind and distribution of food and other factors must variously co-operate and conflict to determine how far a gregarious life is beneficial, and how far a solitary life. Considering, then, that, according to Dr. Savage, the Chimpanzees are more numerous in the season when the greatest number of fruits come to maturity, we may almost with certainty infer that the solitary life generally led by this ape is due chiefly to the difficulty it experiences in getting food at other times of the year.

Is it not, then, most probable that our fruit-eating human or half-human ancestors, living on the same kind of food, and requiring about the same quantities of it as the man-apes, were not more gregarious than they? It is likely, too, that subsequently, when man became partly carnivorous, he continued, as a rule, this solitary kind of life, or that gregariousness became his habit only in part. "An animal of a predatory kind," says Mr. Spencer, "which has prey that can be caught and killed without help, profits by living alone: especially if its prey is much scattered, and is secured by stealthy approach or by lying in ambush. Gregariousness would here be a positive disadvantage. Hence the tendency of large carnivores, and also of small carnivores that have feeble and widely-distributed prey, to lead solitary lives." It is, indeed, very remarkable that even now there are savage peoples who live rather in separate families than in tribes, and that most of these peoples belong to the very rudest races in the world.

"The wild or forest Veddahs," Mr. Pridham states, "build their huts in trees, live in pairs, only occasionally assembling in greater numbers, and exhibit no traces of the remotest civilization, nor any knowledge of social rites." According to Mr. Bailey, the Nilgala Veddahs, who are considered the wildest, "are distributed through their lovely country in small septs, or families, occupying generally caves in the rocks, though some have little bark huts. They depend almost solely on hunting for their support, and hold little communication even with each other."

In Tierra del Fuego, according to Bishop Sterling, family life is exclusive. "Get outside the family," he says, "and relationships are doubtful, if not hostile. The bond of a common lan-

guage is no security for friendly offices." Commander Wilkes states likewise that the Fuegians "appear to live in families and not in tribes, and do not seem to acknowledge any chief;" and, according to M. Hyades, "la famille est bien constituée, mais la tribu n'existe pas, à proprement parler." Each family is perfectly independent of all the others, and only the necessity of common defence now and then induces a few families to form small gangs without any chief. With reference to the Yahgans of the southern part of Tierra del Fuego, the Rev. T. Bridges writes to me, "They live in clans, called by them Ucuhr, which means a house. These Ucuhr comprise many subdivisions, and the members are necessarily related. But," he continues, "the Yahgans are a roving people, having their districts and moving about within these districts from bay to bay and island to island in canoes, without any order. The whole clan seldom travels together, and only occasionally and then always incidentally is it to be found collected. The smaller divisions keep more together. . . . . Occasionally, as many as five families are to be found living in a wigwam, but generally two families." Indeed, in 'A Voice for South America,' Mr. Bridges says that "family influence is the one great tie which binds these natives together, and the one great preventive of violence."

Speaking of the West Australians, who are probably better known to him than to any other civilized man, Bishop Salvado says that they "au lieu de se gouverner par tribus, paraissent se gouverner à la manière patriarchale: chaque famille, qui généralement ne compte pas plus de six à neuf individus, forme comme une petite société, sous la seule dépendance de son propre chef. . . . . Chaque famille s'approprie une espèce de district, dont cependant les familles voisines jouissent en commun si l'on vit en bonne harmonie."

Mr. Stanbridge, who spent eighteen years in the wilds of Victoria, tells us that the savages there are associated in tribes or families, the members of which vary much in number. Each tribe has its own boundaries, the land of which is parcelled out amongst families and carefully transmitted by direct descent; these boundaries being so sacredly maintained that the member of no single family will venture on the lands of a neighbouring

one without invitation. And touching the Gournditch-mara, Mr. Howitt states that "each family camped by itself."

The Bushmans of South Africa, according to Dr. Fritsch, are almost entirely devoid of a tribal organization. Even when a number of families occasionally unite in a larger horde, this association is more or less accidental, and not regulated by any laws. But a horde commonly consists of the different members of one family only, at least if the children are old and strong enough to help their parents to find food. "Sexual feelings, the instinctive love to children, or the customary attachment among relations," says Lichtenstein, "are the only ties that keep them in any sort of union."

The like is stated to be true of several peoples in Brazil. According to v. Martius, travellers often meet there with a language "used only by a few individuals connected with each other by relationship, who are thus completely isolated, and can hold no communication with any of their other countrymen far or near." With reference to the Botocudos, v. Tschudi says that "the family is the only tie which joins these rude children of nature with each other." The Guachís, Manhés, and Guatós for the most part live scattered in families, and the social condition of the Caishánas, among whom each family has its own solitary hut, "is of a low type, very little removed, indeed, from that of the brutes living in the same forests." The Marauá Indians live likewise in separate families or small hordes, and so do some other of the tribes visited by Mr. Bates. According to Mr. Southey, the Cayáguas or Wood-Indians, who inhabited the forests between the Paraná and the Uruguay, were not in a social state; "one family lived at a distance from another, in a wretched hut composed of boughs; they subsisted wholly by prey, and when larger game failed, were contented with snakes, mice, pismires, worms, and any kind of reptile or vermin." Again, speaking of the Coroados, v. Spix and v. Martius say that "they live without any bond of social union, neither under a republican nor a patriarchal form of government. Even family ties are very loose among them."

The Togiagamutes, an Eskimo tribe, never visited by white men in their own country until the year 1880, who lead a thoroughly nomadic life, wandering from place to place in search

of game or fish, appear, according to Petroff, "to live in the most perfect state of independence of each other. Even the communities do not seem bound together in any way; families and groups of families constantly changing their abode, leaving one community and joining another, or perhaps forming one of their own. The youth, as soon as he is able to build a kaiak and to support himself, no longer observes any family ties, but goes where his fancy takes him, frequently roaming about with his kaiak for thousands of miles before another fancy calls him to take a wife, to excavate a miserable dwelling, and to settle down for a time."

The ancient Finns, too, according to the linguistic researches of Professor Ahlqvist, were without any kind of tribal organization. In his opinion, such a state would have been almost impossible among them, as they lived in scattered families for the sake of the chase and in order to have pastures for their reindeer.

That the comparatively solitary life which the families of these peoples live, is due to want of sufficient food, appears from several facts. Lichtenstein tells us that the hardships experienced by the Bushmans in satisfying the most urgent necessities of life, preclude the possibility of their forming larger societies. Even the families that form associations in small separate hordes are sometimes obliged to disperse, as the same spot will not afford sufficient sustenance for all. "The smaller the number, the easier is a supply of food procured."

"Scarcity of food, and the facility with which they move from one place to another in their canoes," says Admiral Fitzroy, "are, no doubt, the reasons why the Fuegians are always so dispersed among the islands in small family parties, why they never remain long in one place, and why a large number are not seen many days in society."

The natives of Port Jackson, New South Wales, when visited a hundred years ago by Captain Hunter, were associated in tribes of many families living together, apparently without a fixed residence, the different families wandering in different directions for food, but uniting on occasions of disputes with another tribe. The Rev. A. Meyer assures us likewise, as regards the Encounter Bay tribe, that "the whole tribe does not always move

in a body from one place to another, unless there should be abundance of food to be obtained at some particular spot; but generally they are scattered in search of food." Again, with reference to the Australians more generally, Mr. Brough Smyth remarks that "in any large area occupied by a tribe, where there was not much forest land, and where kangaroos were not numerous, it is highly probable that the several families composing the tribe would withdraw from their companions for short periods, at certain seasons, and betake themselves to separate portions of the area, ... and it is more than probable—it is almost certain—that each head of a family would betake himself, if practicable, to the portion which his father had frequented."

Finally, from Mr. Wyeth's account in Schoolcraft's great work on the Indian Tribes of the United States, I shall make the following characteristic quotation with reference to the Snakes inhabiting the almost desert region which extends southward from the Snake River as far as the southern end of the Great Salt Lake, and eastward from the Rocky to the Blue Mountains. "The paucity of game in this region is, I have little doubt, the cause of the almost entire absence of social organization among its inhabitants; no trace of it is ordinarily seen among them, except during salmon-time, when a large number of the Snakes resort to the rivers, chiefly to the Fishing Falls, and at such places there seems some little organization. . . . . Prior to the introduction of the horse, no other tribal arrangement existed than such as is now seen in the management of the salmon fishery. . . . . The organization would be very imperfect, because the remainder of the year would be spent by them in families widely spread apart, to eke out the year's subsistence on the roots and limited game of their country. After a portion of them, who are now called Bonacks, had obtained horses, they would naturally form bands and resort to the Buffalo region to gain their subsistence, retiring to the most fertile places in their own, to avoid the snows of the mountains and feed their horses. Having food from the proceeds of the Buffalo hunt, to enable them to live together, they would annually do so, for the protection of their horses, lodges, &c., &c. These interests have caused an organization among the Bonacks, which continues the

year through, because the interests which produce it continue; and it is more advanced than that of the other Snakes."

Here, I think, we have an excellent account of the origin of society, applicable not only to the Snakes, but in its main features, to man in general. The kind of food he subsisted upon, together with the large quantities of it that he wanted, probably formed in olden times a hindrance to a true gregarious manner of living, except perhaps in some unusually rich places. Man in the savage state, even when living in luxuriant countries, is often brought to the verge of starvation, in spite of his having implements and weapons which his ruder ancestors had no idea of. If the obstacle from insufficient food-supply could be overcome, gregariousness would no doubt be of great advantage to him. Living together, the families could resist the dangers of life and defend themselves from their enemies much more easily than when solitary,—all the more so, as the physical strength of man, and especially savage man, is comparatively slight. Indeed, his bodily inferiority, together with his defencelessness and helplessness, has probably been the chief lever of civilization.

"He has," to quote Mr. Darwin, "invented and is able to use various weapons, tools, traps, &c., with which he defends himself, kills or catches prey, and otherwise obtains food. He has made rafts or canoes for fishing or crossing over to neighbouring fertile islands. He has discovered the art of making fire, by which hard and stringy roots can be rendered digestible, and poisonous roots or herbs innocuous." In short, man gradually found out many new ways of earning his living, and more and more emancipated himself from direct dependence on surrounding nature. The chief obstacle to a gregarious life was by this means in part surmounted, and the advantages of such a life induced families or small gangs to unite together in larger bodies. Thus it seems that the gregariousness and sociability of man sprang, in the main, from progressive intellectual and material civilization, whilst the tie that kept together husband and wife, parents and children, was, if not the only, at least the principal social factor in the earliest life of man. I cannot, therefore, agree with Sir John Lubbock that, as a general rule, as we descend in the scale of civilization, the family diminishes, and the tribe increases.

in importance. This may hold good for somewhat higher stages, but it does not apply to the lowest stages. Neither do I see any reason to believe that there *ever* was a time when the family was quite absorbed in the tribe. There does not exist a single well established instance of a people among whom this is the case.

I do not, of course, deny that the tie which bound the children to the mother was much more intimate and more lasting than that which bound them to the father. But it seems to me that the only result to which a critical investigation of facts can lead us is, that in all probability there has been no stage of human development when marriage has not existed, and that the father has always been, as a rule, the protector of his family. Human marriage appears, then, to be an inheritance from some ape-like progenitor.—E. Westermarck, *The History of Human Marriage*, 9–24; 39–50 (Macmillan, 1901).

AUSTRALIAN MARRIAGE

. . . . [In the Urabunna tribe we can] distinguish women of three different levels of generation; the *Nowillie* belong to that of the father and to still older generations; the *Biaka* to younger ones and the *Apillia* and *Nupa* to the same generation as the individual concerned. A man can only marry women who stand to him in the relationship of *Nupa*, that is, are the children of his mother's elder brothers blood or tribal, or, what is the same thing, of his father's elder sisters. The mother of a man's *Nupa* is *Nowillie* to him, and any woman of that relationship is *Mura* to him and he to her, and they must not speak to one another. In connection with this it must be remembered that it is not necessary for the woman to actually have a daughter for her to be *Nowillie* and so *Mura* to the man, the very fact that she was born a sister of his father places her in this relationship. In the same way *Nupa*, the term applied to a woman with whom it is lawful for a man to have marital relations, and which is thus the term applied to a wife, cannot, strictly speaking, be regarded as at all the equivalent of the latter term. It is applied indiscriminately by a dingo man to each and every member of a group of water-hen women with one or more of whom he

may perhaps actually have marital relations, but with any one of whom it is lawful and possible for him to do so. When we say possible for him to have such marital relations, we mean that any one of these women might be assigned to him, as they all, in fact, stand to him in the relationship of potential wives.

The word *Nupa* is without any exception applied indiscriminately by men of a particular group to women of another group, and *vice versa,* and simply implies a member of a group of possible wives or husbands as the case may be.

While this is so, it must be remembered that in actual practice each individual man has one or perhaps two of these *Nupa* women who are specially attached to himself and live with him in his own camp. In addition to them, however, each man has certain *Nupa* women, beyond the limited number just referred to, with whom he stands in the relationship of *Piraungaru.* To women who are the *Piraungaru* of a man (the term is a reciprocal one), the latter has access under certain conditions, so that they may be considered as accessory wives.

The result is that in the Urabunna tribe every woman is the special *Nupa* of one particular man, but at the same time he has no special right to her as she is the *Piraungaru* of certain other men who also have the right of access to her. Looked at from the point of view of the man his *Piraungaru* are a limited number of the women who stand in the relationship of *Nupa* to him. There is no such thing as one man having the exclusive right to one woman; the elder brothers, or *Nuthie,* of the latter, in whose hands the matter lies, will give one man a preferential right, but at the same time they will give other men of the same group a secondary right to her. Individual marriage does not exist either in name or in practice in the Urabunna tribe.

The initiation in regard to establishing the relationship of *Piraungaru* between a man and a woman must be taken by the elder brothers, but the arrangement must receive the sanction of the old men of the group before it can take effect. As a matter of actual practice, this relationship is usually established at times when considerable numbers of the tribe are gathered together to perform important ceremonies, and when these and other matters of importance which require the consideration of the old men

are discussed and settled. The number of a man's ***Piraungaru*** depend entirely upon the measure of his power and popularity; if he be what is called *"ūrkū,"* a word which implies much the same as our word "influential," he will have a considerable number, if he be insignificant or unpopular, then he will meet with scanty treatment.

A woman may be *Piraungaru* to a number of men, and as a general rule men and women who are *Piraungaru* to one another are to be found living grouped together. A man may always lend his wife, that is, the woman to whom he has the first right, to another man, provided always he be her *Nupa,* without the relationship of *Piraungaru* existing between the two, but unless this relationship exists, no man has any right of access to a woman. Occasionally, but rarely, it happens that a man attempts to prevent his wife's *Piraungaru* from having access to her, but this leads to a fight and the husband is looked upon as churlish. When visiting distant groups where, in all likelihood, the husband has no *Piraungaru,* it is customary for other men of his own class to offer him the loan of one or more of their *Nupa* women, and a man, besides lending a woman over whom he has the first right, will also lend his *Piraungaru.*

All the children of women who are *Nupa* to any man, whether they are his special *Nupas,* or *Piraungaru,* or *Nupa* women with whom he has no marital relations, call him *Nia,* and he calls them *Biaka.* Whilst naturally there is a closer tie between a man and the children of the women who habitually live in camp with him, still there is no name to distinguish between the children of his special *Nupa* and those of any other woman to whom he is *Nupa,* but with whom he has no marital relations. All *Biaka,* or children of men who are at the same level in the generation and belong to the same class and totem, are regarded as the common children of these men, and in the same way the latter are regarded collectively by the *Biaka* as their *Nia.*

It will thus be seen that in the Urabunna tribe we have apparently an organisation closely similar to that described by Mr. Howitt as occurring in the Dieri tribe with which it is associated locally. It will also be evident that in both these tribes there is what can only be described as a modified form of group-

marriage, the important features of which may be summarised as follows. We have:—

(1) A group of men all of whom belong to one moiety of the tribe who are regarded as the *Nupas* or possible husbands of a group of women who belong to the other moiety of the tribe.

(2) One or more women specially allotted to one particular man, each standing in the relationship of *Nupa* to the other, but no man having exclusive right to any one woman, only a preferential right.

(3) A group of men who stand in the relationship of *Piraungaru* to a group of women selected from amongst those to whom they are *Nupa*. In other words, a group of women of a certain designation are actually the wives of a group of men of another designation.

A curious feature in the social organisation of the Urabunna tribe is the restriction in accordance with which a man's wife must belong to what we may call the senior side of the tribe so far as he himself is concerned. He is only *Nupa* to the female children of the elder brothers of his mother, or what is exactly the same thing, to those of the elder sisters of his father. It follows from this that a woman is only *Nupa* to men on the junior side of the tribe so far as she is concerned. This marked distinction between elder and younger brothers and sisters is a striking feature, not only in tribes such as the Urabunna, in which descent is counted in the female line, but also in tribes such as the Arunta in which descent is counted in the male line. . . . .

. . . . In connection with this, it may be worth while noting that amongst the Australian natives with whom we have come in contact, the feeling of sexual jealousy is not developed to anything like the extent to which it would appear to be in many other savage tribes. For a man to have unlawful intercourse with any woman arouses a feeling which is due not so much to jealousy as to the fact that the delinquent has infringed a tribal custom.

Now and again sexual jealousy as between a man and woman will come into play, but as a general rule this is a feeling which is undoubtedly subservient to that of the influence of tribal custom, so far as the latter renders it obligatory for a man to

allow other men, at certain times, to have free access to his wife, or so far as it directs him to lend his wife to some other individual as a mark of personal favour to the latter.

Whilst jealousy is not unknown amongst these tribes, the point of importance in respect to the matter under discussion is that it is not strongly enough developed to prevent the occurrence of general intercourse on certain occasions, or the lending of wives at other times; it is, indeed, a factor which need not be taken into serious account in regard to the question of sexual relations amongst the Central Australian tribes. A man in these tribes may be put to death for wrongful intercourse, but at the same time this is no proof of the fact that sexual jealousy exists; it is a serious offence against tribal laws, and its punishment has no relation to the feelings of the individual.

We may now pass on to discuss briefly the customs relating to marriage which have already been enumerated, and in so doing, as we have often to refer to the lending of wives, it must be remembered that we use this term only as applying to the private lending of a woman to some other individual by the man to whom she has been allotted, and do not refer to the custom at corrobborees which has just been dealt with, and which, as it is in reality obligatory and not optional, cannot be regarded as a lending in the same sense in which the term is used in connection with the former custom.

In his well-known work dealing with human marriage, Westermarck has brought together, from various sources, facts relating to similar customs, and, while discussing the hypothesis of promiscuity from an adverse point of view, has endeavoured to explain them as due to various causes. These we may conveniently discuss, examining each briefly in the endeavour to ascertain whether it will or will not serve to explain the marriage customs as we find them in Australian tribes, of which those quoted above may be taken as typical examples. It must be understood that we are here simply dealing with this question so far as the evidence derived from these Australian tribes is concerned.

The first explanation offered is that in certain instances the practice is evidently associated with phallic worship, as, for

example, when in the valley of the Ganges, the virgins had to offer themselves up in the temples of Juggernaut. This implies a state of social development very different from, and much more advanced than, anything met with amongst the Australian natives, and the two customs are evidently quite distinct from one another. It is doubtful how far phallic worship can be said to exist amongst the Australian natives.

In other cases where the bride is for a night considered the common property of the guests at a wedding feast, Westermarck suggests that "It may have been a part of the nuptial entertainment—a horrible kind of hospitality no doubt, but quite in accordance with savage ideas, and analogous to another custom which occurs much more frequently—I mean the practice of lending wives." This presupposes, and in fact is co-existent with, what does not take place in Australian tribes, and that is a more or less regular marriage ceremony at which guests assemble, and such an organised proceeding cannot be said to exist amongst the tribes with which we are dealing; moreover, apart from this, which is not perhaps a very serious objection, though it seems to imply a state of development considerably in advance of that of the Australian natives, there still remains what appears to us to be the insuperable difficulty of accounting, on this hypothesis, for the fact that this "hospitality" amongst Australian tribes is only allowed to a limited number of individuals, all of whom must stand in some particular relationship to the woman.

Westermarck further suggests that it is analogous to the custom of lending wives. Now, amongst the Australian natives wives are certainly lent, but only under strict rules; in the Arunta tribe for example no man will lend his wife to any one who does not belong to the particular group with which it is lawful for her to have marital relations—she is in fact, only lent to a man whom she calls *Unawa,* just as she calls her own husband, and though this may undoubtedly be spoken of as an act of hospitality, it may with equal justice be regarded as evidence of the very clear recognition of group relationship, and as evidence also in favour of the former existence of group marriage.

It is quite true, on the other hand, that a native will some-

times offer his wife, as an act of hospitality, to a white man; but this has nothing to do with the lending of wives which has just been dealt with, and the difference between the two acts is of a radical nature. The white man stands outside the laws which govern the native tribe, and therefore to lend him a wife of any designation does not imply the infringement of any custom. This is purely and simply, as Westermarck points out, an act of hospitality, but the very fact that he will only lend his wife, if he does so at all, to another native of a particular designation, seems to at once imply that we are dealing with a custom at the root of which lies something much more than merely an idea of hospitality. The lending of women to men outside the tribe who are not amenable to its laws and customs is one thing, to lend them to men who are members of the tribe is quite another thing, and the respective origins of the customs in these two radically different cases are probably totally distinct—one is no doubt to be explained on the hypothesis of hospitality, the other is not. The hypothesis of hospitality does not, in short, appear to us to be capable of explaining the fact that both at marriage and at certain other times, it is only particular men who are allowed access to particular women.[1]

A third hypothesis suggested to account for certain customs such as the "jus primae noctis," accorded to chiefs and particular individuals, is that "it may be a right taken forcibly by the stronger, or it may be a privilege voluntarily given to the chief man as a mark of esteem; in either case it depends upon his authority." It will be generally admitted that here again no such explanation will account for the customs as met with amongst Australian tribes. In the first place, while the elder men are

[1] It may perhaps be advisable to point out that in many cases in which apparently women are lent (in the sense in which we use the word, which is the sense in which it is generally used in this connection) indiscriminately, a knowledge of details would show that this was not so. In regard to Australian tribes it is very difficult in most cases, to find out anything like exact details from accounts already published, and general statements such as that a party of men have the privilege of access to a woman are valueless unless we know the exact conditions or relative status of the individual men and the women. In the nine tribes examined by us we have found that intercourse of this nature is strictly regulated by custom.

undoubtedly accorded certain privileges, there is not in any Australian tribe any one individual to whom the term chief can, with strict propriety, be applied, and in the second place the privilege with which we are dealing is by no means enjoyed wholly by the elder men. Unless the leading man in any group stands in a particular relationship to the woman, he has no more right of access to her than the most insignificant man in the group.

A fourth hypothesis is suggested in connection with the right of access granted to men who have assisted the bridegroom in the capture of the woman. "In such cases the 'jus primae noctis' is a reward for a good turn done, or perhaps, as Mr. McLennan suggests, a common war right, exercised by the captors of the woman." There is undoubtedly much to be said in favour of this, but there are objections applying to it as to the second hypothesis dealt with. In the first place, so far as Australia is concerned, it is founded upon such vague statements as that quoted by Brough Smyth upon the authority of Mr. J M. Davis. Mr. Davis says, "when a young man is entitled to have a lubra, he organises a party of his friends, and they make a journey into the territories of some other tribe, and there lie in wait, generally in the evening, by a waterhole, where the lubras come for water. Such of the lubras as may be required are then pounced upon, and, if they attempt to make any resistance, are struck down insensible and dragged off. There is also this peculiarity, that in any instance where the abduction has taken place for the benefit of some one individual, each of the members of the party claims, as a right, a privilege which the intended husband has no power to refuse."

Before it is safe, or indeed possible, to draw any conclusion from this, we require to know exactly who the men were, that is in what relationship they stood to the man whom they were assisting. The more detailed is the information acquired in respect to the Australian tribes, the more clearly is it made apparent that on expeditions such as this, when the object in view is the obtaining of a wife, the man only asks the assistance of men who stand in certain definite relationships to himself. It does not at all follow, that, because a man forms a member of

a party which captures a woman, he is therefore allowed to have access to her. In the tribes which we have investigated, marriage customs regulate the whole proceedings; the equivalent classes in the tribes are well known and, supposing for example, a party consists of men belonging to two classes, which we will call A and B, and a woman is captured belonging, say, to a third class C, which intermarries with Class A, but not with Class B, then no man in the party, if there be any such present, who belongs to Class B will be allowed, or will attempt, to have access to her. When we have merely such general statements as that quoted above from the report of Mr. Davis, it may look very much as if there did exist such a thing as "a common war-right, exercised by the captors of a woman," but the more detailed our information becomes, the less evidence of any such "common war-right" do we find, and in the Australian tribes generally it may be regarded as very doubtful if any such right really exists. Amongst the tribes with which we are acquainted it certainly does not.

Marriage by capture is again, at the present day, whatever it may have been in the past, by no means the rule in Australian tribes, and too much stress has been laid upon this method. It is only comparatively rarely that a native goes and seizes upon some lubra in a neighbouring tribe; by far the most common method of getting a wife is by means of an arrangement made between brothers or fathers of the respective men and women, whereby a particular woman is assigned to a particular man. Marriage by capture may indeed be regarded as one of the most exceptional methods of obtaining a wife amongst the natives at the present day. We are not of course referring here to customs which may, in many tribes, be explained as indicative of a former existence of the practice; whether, in the remote past, capture was the prevailing method can only be a matter of conjecture, but the customs at marriage in the tribes here dealt with —and it may be pointed out that these occupy a very large area in the centre of the continent, so that we are by no means dealing with an isolated example—do not seem to indicate that they owe their origin to anything like the recognition of the right of captor, as captor.

The fifth hypothesis is that of promiscuity. Certainly at the present day, so far as we can tell, there is some definite system of marriage in all Australian tribes and promiscuity, as a normal feature, does not exist. At the same time none of the hypotheses put forward by Westermarck will serve to explain the curious and very strongly marked features of the marriage customs, the essential points in which are, (1) that men have access to women who are strictly forbidden to them at ordinary times, and (2) that it is only certain definite men standing in certain particular relationships to the woman who thus have access.

To make use of the same analogy again, it seems that in the evolution of the social organisation and customs of a savage tribe, such features as those which we are now discussing are clearly comparable to the well known rudimentary organs, which are often of great importance in understanding the phylogeny of the animal in which at some time of its development they are present. Such rudimentary structures are emblematic of parts which are perhaps only transient, or, at most, imperfectly developed in the animal, but their presence shows that they were, at some past time, more highly developed and functional in ancestral stages.

It is thus perhaps permissible to speak of "rudimentary customs," in just the same way, and with just the same significance attached to them, in which we speak of "rudimentary organs" and we may recognise in them an abbreviated record of a stage passed through in the development of the customs of the tribe amongst which they are found. Such rudimentary customs, like those which are associated with the Maypole for example, point back to a time when they were more highly developed than they are at present, and when the customs were more or less widely different from those now prevailing.

The origin of the marriage customs of the tribes now dealt with cannot possibly, so it seems to us, be explained as due either to a feeling of hospitality, or to the right of captors; nor can they be explained, as in certain cases the "jus primae noctis" can, as a right forcibly taken by the stronger from the weaker. There can be no reasonable doubt but that at one time the marriage arrangements of the Australian tribes were in a more primi-

tive state than they are at the present day, and the customs with which we are dealing can be most simply explained as rudimentary ones serving, possibly in a very abbreviated way, to show the former existence of conditions which are no longer prevalent.

In regard to the marriage customs of the tribes now dealt with, we have the following facts. In the first place we have a group of women who are, what is called *Unawa,* to a group of men and *vice versa,* that is, all of these men and women are reciprocally marriageable. This, it may be observed, is not a matter of assumption but of actual fact. In the Arunta tribe for example a Panunga man will call the Purula whom he actually marries *Unawa,* but he has no name to distinguish her from all the other Purula women whom he does not actually marry, but any of whom he might lawfully marry. Further than this, while he has no actual right of access to any woman, except his own special *Unawa* woman or women, there are times, as, for example, during special ceremonies, or when he is visiting a distant group, when a woman is lent to him, but that woman must be one who is *Unawa* to him. In other words, we have individual marriage in which a man is limited in his choice to women of a particular group, each one of whom stands to him in the relationship of a possible wife, and with whom it is lawful for him, with the consent of her special *Unawa* man, to have marital relations. However hospitably inclined a man may feel, he will never lend his wife to a man who does not belong to a group of men to each of whom she stands in the relationship of *Unawa* or possible wife. A Panunga man may lend his wife to another Panunga, but for a man of any other class to have marital relations with her would be a gross offence.

In the second place, we have certain customs concerned with marriage which are of what we may call a transient nature. Taking the Kaitish tribe as an example, we find that, when marriage actually takes place, the operation of *Atna-ariltha-kuma* is performed by the elder sister of the woman, and that men of the following relationship have access to her in the order named: *Ipmunna,* that is individuals of the same moiety of the tribe as

her own; mothers' brothers' sons; tribal elder and younger brothers; and lastly, men whom she might lawfully marry, but who have no right to her when once she becomes the property of a member of the group to which they belong. By referring to the tables already given, it will be seen that these men, if we take a particular example, say a Panunga woman, are Ungalla, Uknaria, Purula and Panunga. In other words, both men of her own, and of the moiety of the tribe to which she does not belong, have access to her, but only for a very limited time, and the same holds true in the case of all the tribes examined.

It will therefore be seen that (1) for a given time a woman has marital relations with men of both moieties of the tribe, and (2) that she may during her life, when once she has become the special wife of some individual man, have lawfully, but dependent always upon the consent of the latter, marital relations with any of the group of men to each and all of whom she stands in the relationship of *Unawa.*

These are the actual facts with which we have to deal, and the only possible explanation of them appears to us to lie along the following lines. We are here of course only dealing with those tribes in which descent is counted in the male line, the remaining tribe—the Urabunna—in which descent is counted in the female line, will be referred to subsequently. It appears to us that, in the present customs relating to marriage amongst this section of the Australian natives, we have clear evidence of three grades of development. We have (1) the present normal condition of individual marriage with the occasional existence of marital relations between the individual wife and other men of the same group as that to which her husband belongs, and the occasional existence also of still wider marital relations; (2) we have evidence of the existence at a prior time of actual group marriage; and (3) we have evidence of the existence at a still earlier time of still wider marital relations.

The evidence in favour of the hypothesis, that the present marriage system of such a tribe as the Arunta is based upon the former actual existence of group marriage, seems to us to be incontestable. The one most striking point in regard to marriage at the present day is that a man of one group is absolutely con-

fined in his choice of a wife to women of a particular group, and that it is lawful for him to marry any woman of that group. When once he has secured a woman she is his private property, but he may, and often does, lend her to other men, but only if they belong to his own group. Further still, the natives have two distinct words to denote on the one hand surreptitious connection between a man and a woman who is not his own wife, but belongs to the proper group from which his wife comes, and, on the other hand, connection between a man and a woman belonging to forbidden groups. The first is called *Atna-nylkna,* the second is *Iturka.* In the face of the facts which have been brought forward, we see no possible explanation other than that the present system is derived from an earlier one in which the essential feature was actual group marriage.

When we turn to the Urabunna tribe we find the evidence still clearer. Here we have only two classes, viz., Matthurie and Kirarawa. A Matthurie man marries a Kirarawa woman, and *vice versa.* There is no such thing as an individual wife. Every Matthurie man stands in the relationship of *Nupa* to a group of Kirarawa women, and they are, in the same way, *Nupa* to him. Every man has, or at least may have, one or more of these *Nupa* women allotted to him as wives, and to whom he has the first but not the exclusive right of access. To certain *Nupa* women other than his own wives he stands in the relationship of *Piraungaru,* and they to him. These *Piraungaru* are the wives of other men of his own group, just as his own wives are *Piraungaru* to some of the latter men, and we thus find in the Urabunna tribe that a group of women actually have marital relations with a group of men. Westermarck has referred in his work to what he calls "the pretended group-marriages" of the Australians. In the case of the Urabunna there is no pretence of any kind, and exactly the same remark holds true of the neighbouring Dieri tribe. . . . .

It must be remembered, of course, that any one woman may be *Piraungaru* to a larger number of men than the two who are represented in the diagram. The relation of *Piraungaru* is established between any woman and men to whom she is *Nupa*—that is, to whom she may be lawfully married by her *Nuthie* or

elder brothers. If a group be camped together, and, as a matter of fact groups of individuals who are *Piraungaru* to one another do usually camp together, then in the case of F1, her special *Nupa* man M1 has the first right to her, but if he be absent then M2 and M3 have the right to her; or, if M1 be present, the two have the right to her subject to his consent, which is practically never withheld.[1]

It is difficult to see how this system can be regarded otherwise than as an interesting stage in the transition from group to individual marriage. Each woman has one special individual who has the first right of access to her, but she has also a number of individuals of the same group who have a right to her either, if the first man be present, with his consent or, in his absence, without any restriction whatever.

In this tribe, just as in all the others, connection with women of the wrong group is a most serious offence, punishable by death or very severe treatment.

The evidence in favour of the third grade, that is the existence of wider marital relations than those indicated by the form of group marriage which has just been discussed, is naturally more indefinite and difficult to deal with. Westermarck, after having discussed at length the hypothesis of promiscuity, says: "Having now examined all the groups of social phenomena adduced as evidence for the hypothesis of promiscuity, we have found that, in point of fact, they are no evidence. Not one of the customs alleged as relics of an ancient state of indiscriminate cohabitation of the sexes or 'communal marriage' presupposes the former existence of that state," and further on he says: "It is not, of course, impossible that, among some people, intercourse between the sexes may have been almost promiscuous. But there is not a shred of genuine evidence for the notion that promiscuity ever formed a general stage in the social history of mankind."

It need scarcely be pointed out how totally opposed this conclusion of Mr. Westermarck's is to that arrived at by other workers, and we think there can be little doubt but that Mr.

[1] A diagram is here omitted. M.=male, F.=female

Westermarck is in error with regard to the question of group marriage amongst the Australian natives.

We are here simply concerned with the question as to whether there is any evidence in favour of the supposition that in former times there existed wider marital relations amongst the Australian natives than is indicated in the system of group marriage, the evidence in favour of which has been dealt with. If any were forthcoming, there can be little doubt but that, *a priori,* we should expect to find it in the nature of what we have called a rudimentary custom, such as might be met with at the actual time of marriage, that is, when a woman is handed over to become the possession of one man. None of the hypotheses brought forward by Westermarck to explain the customs on this occasion can, we think, be considered as at all satisfactory in regard to those of the tribes with which we are dealing. The one striking feature of the marriage customs is that particular men representative of the woman's own moiety, and of the half of the tribe to which she does not belong, have access to her, and always in a particular order, according to which those who, in the present state of the tribe, have lawfully the right to her come last.

These customs, together with the one already dealt with, referring to a general intercourse during the performance of certain corrobborees are, it appears to us, only capable of any satisfactory explanation on the hypothesis that they indicate the temporary recognition of certain general rights which existed in the time prior to that of the form of group marriage of which we have such clear traces yet lingering amongst the tribes. We do not mean that they afford direct evidence of the former existence of actual promiscuity, but they do afford evidence leading in that direction, and they certainly point back to a time when there existed wider marital relations than obtain at the present day—wider, in fact, than those which are shown in the form of group marriage from which the present system is derived. On no other hypothesis yet advanced do the customs connected with marriage, which are so consistent in their general nature and leading features from tribe to tribe, appear to us to be capable of satisfactory explanation.—SPENCER AND GILLEN, *Native Tribes of Central Australia,* 61–65; 91–111.

POLYANDRY AMONG THE TODAS

. . . . The Todas have a completely organised and definite system of polyandry. When a woman marries a man, it is understood that she becomes the wife of his brothers at the same time. When a boy is married to a girl, not only are his brothers usually regarded as also the husbands of the girl, but any brother born later will similarly be regarded as sharing his older brothers' rights.

In the vast majority of polyandrous marriages at the present time, the husbands are own brothers. A glance through the genealogies will show the great frequency of polyandry, and that in nearly every case the husbands are own brothers. In a few cases in which the husbands are not own brothers, they are clan brothers, *i. e.*, they belong to the same clan and are of the same generation. . . . .

There is only one instance recorded in the genealogies in which a woman had at the same time husbands belonging to different clans, ... and in this case the men were half-brothers by the same mother, the fathers being of different clans. While I was on the hills, there was a project on foot that three unmarried youths belonging to three different clans should have a wife in common, but the project was frustrated and the marriage did not take place.

It is possible that at one time the polyandry of the Todas was not so strictly 'fraternal' as it is at present, and it is perhaps in favour of this possibility that in the instance of polyandry given by Harkness the husbands were obviously not own brothers. It must be remembered, however, that this case came to the notice of Captain Harkness because the polyandry had led to disputes, and, as we shall see shortly it is in those cases of polyandry in which the husbands are not own brothers that disputes arise.

The arrangement of family life in the case of a polyandrous marriage differs according as the husbands are, or are not, own brothers.

In the former case it seemed that there is never any difficulty, and that disputes never arise. The brothers live together,

and my informants seemed to regard it as a ridiculous idea that there should ever be disputes or jealousies of the kind that might be expected in such a household. When the wife becomes pregnant, the eldest brother performs the ceremony of giving the bow and arrow, but the brothers are all equally regarded as the fathers of the child. If one of the brothers leaves the rest and sets up an establishment of his own, it appeared, however, that he might lose his right to be regarded as the father of the children.

If a man is asked the name of his father, he usually gives the name of one man only, even when he is the offspring of a polyandrous marriage. I endeavoured to ascertain why the name of one father only should so often be given, and it seemed to me that there is no one reason for the preference. Often one of the fathers is more prominent and influential than the others, and it is natural in such cases that the son should speak of himself as the son of the more important member of the community. Again, if only one of the fathers of a man is alive, the man will always speak of the living person as his father; thus Siriar (20) always spoke of Ircheidi as his father, and even after Ircheidi is dead, it seems probable that he will so have fallen into the custom of speaking of the latter as his father that he will continue to do so, and it will only be when his attention is especially directed to the point that he will say that Madbeithi was also his father.

In most of the genealogies, the descent is traced from some one man, but there can be no doubt whatever that this man was usually only one of several brothers, and the probable reason why one name only is remembered is that this name was that of an important member of the community, or of the last survivor of the brother-husbands.

When the husbands are not own brothers, the arrangements become more complicated. When the husbands live together as if they were own brothers there is rarely any difficulty. If, on the other hand, the husbands live at different villages, the usual rule is that the wife shall life with each husband in turn, usually for a month at a time, but there is very considerable elasticity in the arrangement.

It is in respect of the 'fatherhood' of the children in these cases of non-fraternal polyandry that we meet with the most interesting feature of Toda social regulations. When the wife of two or more husbands (not own brothers) becomes pregnant, it is arranged that one of the husbands shall perform the ceremony of giving the bow and arrow. The husband who carries out this ceremony is the father of the child for all social purposes; the child belongs to the clan of this husband if the clans of the husbands differ and to the family of this husband if the families only differ. When the wife again becomes pregnant, another husband may perform the *pursütpimi* ceremony, and if so, this husband becomes the father of the child; but more commonly the *pursütpimi* ceremony is not performed at all during the second pregnancy, and in this case the second child belongs to the first husband, *i. e.*, to the husband who has already given the bow and arrow. Usually it is arranged that the first two or three children shall belong to the first husband, and that at a succeeding pregnancy (third or fourth), another husband shall give the bow and arrow, and, in consequence, become the father not only of that child, but of all succeeding children till some one else gives the bow and arrow.

The fatherhood of a child depends entirely on the *pursütpimi* ceremony, so much so that a dead man is regarded as the father of a child if no other man has performed the essential ceremony.

In the only case in the genealogies in which the husbands of a woman were of different clans, it happened there were only two children, and that one father gave the bow and arrow for the first child and the other for the second.

If the husbands separate, each husband takes with him those children who are his by virtue of the *pursütpimi* ceremony.

There is no doubt whatever as to the close association of the polyandry of the Todas with female infanticide. As we have seen, the Todas now profess to have completely given up the practice of killing their female children, but it is highly probable that the practice is still in vogue to some extent. It has certainly, however, diminished in frequency, and the consequent increase in the proportion of women is leading to some modification in the associated polyandry.

It has been stated by most of those who have written about the Todas that the custom of polyandry is dying out, but a glance at the genealogies will show that the institution is in full working order even in the case of the infant marriages which are being contracted at the present time. There is, however, some reason to believe that it is now less frequent for all the brothers of a family to have one wife in common. A study of the genealogies shows that often each brother has his own wife, or that several brothers have more than one wife between them. It seemed to me, however, almost certain that in these cases the brothers have the wives in common. In compiling the genealogies, one informant would give me the names of two or more brothers each with one wife, while another would give me the name of one brother with two or three wives, and would say that the other brothers had the same wives. When I pointed out the discrepancy and asked which was the true account, they usually said it made no difference and were almost contemptuous because I seemed to think that there was any disagreement between the two versions. I think it probable that it has become less frequent for several brothers to have only one wife in common, but I am very doubtful whether this indicates any real decrease in the prevalence of polyandry.

It seems to me that the correct way of describing the present condition of Toda society is to say that polyandry is as prevalent as ever, but that, owing to the greater number of women, it is becoming associated with polygyny. When there are two brothers it does not seem that each takes a wife for himself, but rather that they take two wives in common.

. . . . From the foregoing account it appears that a woman may have one or more recognised lovers as well as several husbands. From the account given of the dairy ritual, it appears that she may also have sexual relations with dairymen of various grades—that, for instance, the *wursol,* on the nights when he sleeps in the hut, may be the lover of any Tarthar girl. Further, there seems to be no doubt that there is little restriction of any kind on sexual intercourse. I was assured by several Todas

not only that adultery was no motive for divorce, but that it was in no way regarded as wrong. It seemed clear that there is no word for adultery in the Toda language. My interpreter, Samuel, had translated the Commandments shortly before my visit, and only discovered while working with me that the expression he had used in translating the seventh Commandment really bore a very different meaning.

When a word for a concept is absent in any language it by no means follows that the concept has not been developed, but in this case I have little doubt that there is no definite idea in the mind of the Toda corresponding to that denoted by our word 'adultery.' Instead of adultery being regarded as immoral, I rather suspected, though I could not satisfy myself on the point, that, according to the Toda idea, immorality attaches rather to the man who grudges his wife to another. One group of those who experience difficulty in getting to the next world after death are the *kashtvainol,* or grudging people, and I believe this term includes those who would in a more civilised community be plaintiffs in the divorce court.

In nearly every known community, whether savage, barbarous or civilised, there is found to exist a deeply rooted antipathy to sexual intercourse between brother and sister. In savage communities where kinship is of the classificatory kind, this antipathy extends not only to the children of one mother, but to all those who are regarded as brothers and sisters because they are members of the same clan or other social unit. In some communities, such as those of Torres Straits, this antipathy may extend to relatives as remote as those we call second and third cousins, so long as descent through the male line from a common ancestor and membership of the same clan lead people to regard one another as brother and sister.

It is very doubtful whether this widespread, almost universal abhorrence is shared by the Todas. I was told that members of the same clan might have intercourse with one another, and in the preliminary ceremony for the office of *palol,* a special part was taken by a woman who possessed the qualification that she had never had intercourse with a man of her own clan, and it was said it was far from easy to find such a woman. When I

collected this information, it seemed clear that this meant that a woman who, before marriage had belonged to a given clan, had never had intercourse with a man of that clan. But since a woman joins the clan of her husband, and since, marriage taking place at an early age, the woman belongs to her husband's clan from this early age, it has since occurred to me that an alternative explanation of the restriction is possible, though it does not seem to me to be likely. It is possible that what is meant is that the woman should never have had intercourse with any of her husband's clan except those who are properly her husbands. If this explanation were the correct one, the prohibition would seem to be directed against practices resembling communal marriage, and would be interesting evidence in favour of the existence of this type of marriage, since there are no prohibitions against what does not exist nor has ever existed. As I have said, however, I think it very unlikely that the prohibition is to be interpreted in this way, but I regret very greatly that it did not occur to me to inquire carefully into this point on the spot.

So far as I could tell, the laxity in sexual matters is equally great before and after marriage. If a girl who has been married in infancy, but has not yet joined her husband, should become pregnant, the husband would be called upon to give the bow and arrow at the *pursütpimi* ceremony and would be the father of the child, even if he were still a young boy, or if it were known that he was not the father of the child. I only heard of one case in recent times in which an unmarried girl had become pregnant. In this case a man who was a *matchuni* of the woman was called in to give the bow and arrow, but he did not regard himself as married to the woman and did not live with her. That some stigma was attached to the occurrence may possibly be shown by the fact that this woman remained unmarried for some years, and then only married a man who was certainly below the general standard of the Todas in intelligence. The child, a daughter, of the woman died soon after birth, so that I had no chance of ascertaining whether the irregularity of her birth would have had any influence on her position in Toda society. If, however, a child is born without the *pur-*

sütpimi ceremony having been performed, it is called *padmokh* and an indelible disgrace attaches to it throughout life.

From any point of view, and certainly from the point of view of the savage, the sexual morality of the Todas among themselves is very low. It is an interesting subject of speculation how far this laxity is the result of the practice of polyandry, for since low sexual morality brings in its train various factors which tend to sterility, we may have here, as Mr. Punnett has suggested elsewhere, a reason why polyandry is so rare a form of marriage. The practice of polyandry must almost inevitably weaken the sentiment of possession on the part of the man which does so much to maintain the more ordinary forms of marriage. —W. H. R. Rivers, *The Todas*, 515–32 (Macmillan, 1904).

MARRIAGE BY PURCHASE AND LIBERTY OF CHOICE

. . . . Among most existing uncivilized peoples a man has, in some way or other, to give compensation for his bride. Marriage by capture has been succeeded by marriage by purchase.

The simplest way of purchasing a wife is no doubt to give a kinswoman in exchange for her. "The Australian male," says Mr. Curr, "almost invariably obtains his wife or wives, either as the survivor of a married brother, or in exchange for his sisters, or later on in life for his daughters." A similar exchange is sometimes effected in Sumatra.

Much more common is the custom of obtaining a wife by services rendered to her father. The man goes to live with the family of the girl for a certain time, during which he works as a servant. This practice, with which Hebrew tradition has familiarized us, is widely diffused among the uncivilized races of America, Africa, Asia, and the Indian Archipelago. Often it is only those men who are too poor to pay cash that serve in the father-in-law's house till they have given an equivalent in labour; but sometimes not even money can save the bridegroom from this sort of servitude. In some cases he has to serve his time before he is allowed to marry the girl; in others he gets her in advance. Again, among several peoples, already mentioned, the man goes over to the woman's family or tribe to live there for ever; but Dr. Starcke suggests that this custom has a different origin

from the other, being an expression of the strong clan sentiment, and not a question of gain.

According to Mr. Spencer, the obtaining of wives by services rendered, instead of by property paid, constitutes a higher form of marriage and is developed along with the industrial type of society. "This modification," he says, "practicable with difficulty among rude predatory tribes, becomes more practicable as there arise established industries affording spheres in which services may be rendered." But it should be noticed that, even at a very low stage of civilization, a man may help his father-in-law in fishing and hunting, whilst industrial work promotes accumulation of property, and consequently makes it easier for the man to acquire his wife by real purchase. We find also the practice of serving for wives prevalent among such rude races as the Fuegians and the Bushmans; and, in the 'Eyrbyggja Saga,' Vigstyr says to the berserk Halli, who asked for the hand of his daughter Asdî, "As you are a poor man, I shall do as the ancients did and let you deserve your marriage by hard work." It seems, then, almost probable that marriage by services is a more archaic form than marriage by purchase; but generally they occur simultaneously.

The most common compensation for a bride is property paid to her owner. Her price varies indefinitely. A pretty, healthy, and able-bodied girl commands of course a better price than one who is ugly and weak; a girl of rank, a better price than one who is mean and poor; a virgin, generally a better than a widow or a repudiated wife. Among the Calfornian Karok, for instance, a wife is seldom purchased for less than half a string of dentalium shell, but "when she belongs to an aristocratic family, is pretty, and skilful in making acorn-bread and weaving baskets, she sometimes costs as high as two strings. The bride-price, however, varies most according to the circumstances of the parties, and according to the value set on female labour. In British Columbia and Vancouver Island, the value of the articles given for the bride ranges from £20 to £40 sterling. The Indians of Oregon buy their wives for horses, blankets, or buffalo robes. Among the Shastika in California, "a wife is purchased of her father for shell-money or horses, ten or twelve cayuse ponies being paid

for a maid of great attractions." Again, the Navajos of New Mexico consider twelve horses so exorbitant a price for a wife, that it is paid only for "one possessing unusual qualifications, such as beauty, industry, and skill in their necessary employments;" and the Patagonians give mares, horses, or silver ornaments for the bride.

In Africa, not horses but cattle are considered the most proper equivalent for a good wife. Among the Kafirs, three, five, or ten cows are a low price, twenty or thirty a rather high; but, according to Barrow, a man frequently obtained a wife for an ox or a couple of cows. The Demaras are so poor a people that they are often glad to take one cow for a daughter. Among the Banyai, many heads of cattle or goats are given to induce the parents of the girl "to give her up," as it is termed, *i.e.*, to forego all claim on her offspring, for if nothing is given, the family from which she comes can claim the children as part of itself. In Uganda, the ordinary price of a wife is either three or four bullocks, six sewing needles, or a small box of percussion caps, but Mr. Wilson was often offered one in exchange for a coat or a pair of shoes. In the Mangoni country, two skins of a buck are considered a fair price, and among the Negroes of Bondo, a goat; whereas, among the Mandingoes, as we are told by Caillié, no wife is to be had otherwise than by the presentation of slaves to the parents of the mistress.

The Chulims paid from five to fifty roubles for a wife, the Turalinzes usually from five to ten. Rich Bashkirs pay sometimes even 3,000 roubles, but the poorest may buy a wife for a cart-load of wood or hay. In Tartary, parents sell a daughter for some horses, oxen, sheep, or pounds of butter; among the Samoyedes and Ostyaks, for a certain number of reindeer. Among the Indian Kisáns, "two baskets of rice and a rupee in cash constitute the compensatory offering given to the parents of the girl." Among the Mishmis, a rich man gives for a wife twenty mithuns (a kind of oxen), but a poor man can get a wife for a pig. In Timor-laut, according to Mr. Forbes, "no wife can be purchased without elephants' tusks." In the Caroline Islands, "the man makes a present to the father of the girl whom he marries, consisting of fruits, fish, and similar things;" in Samoa,

the bride-price included canoes, pigs, and foreign property of any kind which might fall into their hands; and, among the Fijians, "the usual price is a whale's tooth, or a musket."

Among some peoples marriage may take place on credit, though, generally, the wife and her children cannot leave the parental home until the price is paid in full. In Unyoro, according to Emin Pasha, when a poor man is unable to procure the cattle required for his marriage at once, he may, by agreement with the bride's father, pay them by instalments; the children, however, born in the meantime belong to the wife's father, and each of them must be redeemed with a cow.

Marriage by exchange or purchase is not only generally prevalent among existing lower races; it occurs, or formerly occurred, among civilized nations as well. In Central America and Peru, a man had to serve for his bride. In China, a present is given by the father of the suitor, the amount of which is not left to the goodwill of the parties, as the term "present" would suggest, but is exactly stipulated for by the negotiators of the marriage; hence, as Mr. Jamieson remarks, it is no doubt a survival of the time when the transaction was one of ordinary bargain. In Japan, the proposed husband sends certain prescribed presents to his future bride, and this sending of presents forms one of the most important parts of the marriage ceremony. In fact, when once the presents have been sent and accepted, the contract is completed, and neither party can retract. Mr. Küchler says he has been unable to find out the exact meaning of these presents: the native books on marriage are silent on the subject, and the Japanese themselves have no other explanation to give than that the custom has been handed down from ancient times. But from the facts recorded in the next chapter it is evident that the sending of presents is a relic of a previous custom of marrying by purchase.

In all branches of the Semitic race men had to buy or serve for their wives, the "mohar" or "mahr" being originally the same as a purchase sum. In the Books of Ruth and Hosea, the bridegroom actually says that he has bought the bride; and the modern Jews, according to Michaelis, have a sham purchase among their marriage ceremonies, which is called "marrying by

the penny." In Mohammedan countries marriage differs but little from a real purchase. The same custom prevailed among the Chaldeans, Babylonians, and Assyrians.

Speaking of the ancient Finns, the Finnish philologist and traveller, Castrén, remarks, "There are many reasons for believing that a cap full of silver and gold was one of the best proxies in wooing among our ancestors." Evident traces of marriage by purchase are, indeed, found in the 'Kalevala' and the 'Kanteletar;' and, in parts of Finland, symbols of it are still left in the marriage ceremony. Among the East Finnish peoples, marriage by purchase exists even now, or did so till quite lately.

Among the Aryan nations, too, marriage was based on the purchase of the wife. The Hindu bride, in Vedic times, had to be won by rich presents to the future father-in-law; and one of the eight forms of marriage mentioned, though disapproved of, by Manu—the Asura form—was marriage by purchase. According to Dubois, to marry and to buy a wife are in India synonymous terms, as almost every parent makes his daughter an article of traffic. Aristotle tells us that the ancient Greeks were in the habit of purchasing wives, and in the Homeric age a maid was called ἀλφεσίβοια, *i. e.*, one "who yields her parents many oxen as presents from her suitor." Among the Thracians, according to Herodotus, marriage was contracted by purchase. So also throughout Teutonic antiquity. The ancient Scandinavians believed that even the gods had bought their wives. In Germany, the expression "to purchase a wife" was in use till the end of the Middle Ages, and we find the same term in Christian IV.'s Norwegian Law of 1604. As late as the middle of the sixteenth century the English preserved in their marriage ritual traces of this ancient legal procedure; whilst in Thuringia, according to Franz Schmidt, the betrothal ceremony even to this day indicates its former occurrence.

Purchase, as Dr. Schrader remarks, cannot with equal certainty be established as the oldest form of marriage on Roman soil. But the symbolical process of *coemptio*—the form of marriage among the plebeians—preserved a reminiscence of the original custom in force, if not at Rome, at least among the ancestors of the Romans. In Ireand and Wales, in ancient

times, the bride-price consisted usually of articles of gold, silver, and bronze, sometimes even land. The Slavs, also, used to buy their wives; and, among the South Slavonians, the custom of purchasing the bride still partially prevails, or recently did so. In Servia, at the beginning of the present century, the price of girls reached such a height that Black George limited it to one ducat.

In spite of this general prevalence of marriage by purchase, we have no evidence that it is a stage through which every race has passed. It must be observed, first, that in sundry tribes the presents given by the bridegroom are intended not exactly to compensate the parents for the bride, but rather to dispose them favourably to the match. Colonel Dalton says, for example, that, among the Pádams, one of the lowest peoples of India, it is customary for a lover to show his inclinations whilst courting by presenting his sweetheart and her parents with small delicacies, such as field mice and squirrels, though the parents seldom interfere with the young couple's designs, and it would be regarded as an indelible disgrace to barter a child's happiness for money. The Ainos of Yęsso, says Mr. Bickmore, "do not buy their wives, but make presents to the parents of saki, tobacco, and fish;" and the amount of these gifts is never settled beforehand. The game and fruits given by the bridegroom immediately before marriage, among the Puris, Coroados, and Coropos, seem to v. Martius to be rather a proof of his ability to keep a wife than a means of exchange; whereas the more civilized tribes of the Brazilian aborigines carry on an actual trade in women.

Speaking of the Yukonikhotana, a tribe of Alaska, Petroff states that the custom of purchasing wives does not exist among them. The Californian Wintun, who rank among the lower types of the race, generally pay nothing for their brides. The Niam-Niam and some other African peoples, most of the Chittagong Hill tribes, the aboriginal inhabitants of Kola and Kobroor, of the Aru Archipelago, who live in trees or caves, and apparently also the Andamanese are in the habit of marrying without making any payment for the bride. Among the Veddahs, according to M. Le Mesurier, no marriage presents are given on either side, but Mr. Hartshorne states that "a marriage is attended with

no ceremony beyond the presentation of some food to the parents of the bride."

In Ponapé, says Dr. Finsch, marriage is not based on purchase; but this is contrary to the general custom in the Carolines, as also in the adjacent Pelew Islands, where women are bought as wives by means of presents to the father. In the Kingsmill Group, according to Wilkes, "a wife is never bought, but it is generally supposed that each party will contribute something towards the household stock." With regard to the Hawaiians, Ellis remarks, "We are not aware that the parents of the woman received anything from the husband, or gave any dowry with the wife." And Mr. Angas even asserts that the practice of purchasing wives is not generally adopted in Polynesia. But this statement is doubtful, as, at least in Samoa, Tahiti, Naukahiva, the bridegroom gains the bride by presents to her father. And in Melanesia marriage by purchase is certainly universal. Among the South Australian Kurnai, according to Mr. Howitt, marriages were brought about "most frequently by elopement, less frequently by capture, and least frequently by exchange or by gift."

Purchase of wives may, with even more reason than marriage by capture, be said to form a general stage in the social history of man. Although the two practices often occur simultaneously, the former has, as a rule, succeeded the latter, as barter in general has followed upon robbery. The more recent character of marriage by purchase appears clearly from the fact that marriage by capture frequently occurs as a symbol where marriage by purchase occurs as a reality. Moreover, there can be little doubt that barter and commerce are comparatively late inventions of man.

Dr. Peschel, indeed, contends that barter existed in those ages in which we find the earliest signs of our race. But we have no evidence that it was in this way that the cave-dwellers of Périgord, of the rein-deer period, obtained the rock crystals, the Atlantic shells, and the horns of the Polish Saiga antelope, which have been found in their settlements; and we may not, in any case, conclude that "commerce has existed in all ages, and among all inhabitants of the world." There are even in modern

times instances of savage peoples who seem to have a very vague idea of barter, or perhaps none at all. Concerning certain Solomon Islanders, Labillardière states, "We could not learn whether these people are in the habit of making exchanges; but it is very certain that it was impossible for us to obtain anything from them in this way; . . . . yet they were very eager to receive everything we gave them." For some time after Captain Weddell began to associate with the Fuegians, they gave him any small article he expressed a wish for, without asking any return; but afterwards they "acquired an idea of barter." Nor did the Australians whom Cook saw, and the Patagonians visited by Captain Wallis in 1766, understand traffic, though they now understand it. Again, with regard to the Andamanese Mr. Man remarks, "They set no fixed value on their various properties, and rarely make or procure anything with the express object of disposing of it in barter. Apparently they prefer to regard their transactions as presentations, for their mode of negotiating is to *give* such objects as are desired by another in the hope of receiving in return something for which they have expressed a wish, it being tacitly understood that, unless otherwise mentioned beforehand, no 'present' is to be accepted without an equivalent being rendered. The natural consequence of this system is that most of the quarrels which so frequently occur among them originate in failure on the part of the recipient in making such a return as had been confidently expected." It must also be noted that those uncivilized peoples among whom marriage by purchase does not occur are, for the most part, exceedingly rude races.

As M. Koenigswarter and Mr. Spencer have suggested, the transition from marriage by capture to marriage by purchase was probably brought about in the following way: abduction, in spite of parents, was the primary form; then there came the offering of compensation to escape vengeance, and this grew eventually into the making of presents beforehand. Thus, among the Ahts, according to Mr. Sproat, when a man steals a wife, a purchase follows, "as the friends of the woman must be pacified with presents." In New Guinea, and Bali, as also among the Chukmas and Araucanians, it often happens that the bridegroom carries off, or elopes with, his bride, and afterwards pays a com-

pensation-price to her parents. Among the Bodo and Mech, who still preserve the form of forcible abduction in their marriage ceremony, the successful lover, after having captured the girl, gives a feast to the bride's friends and with a present conciliates the father, who is supposed to be incensed. The same is reported of the Maoris, whilst among the Tangutans, according to Prejevalsky, the ravisher who has stolen his neighbour's wife pays the husband a good sum as compensation, but keeps the wife.

It is a matter of no importance in this connection that, among certain peoples, the price of the bride is paid not to the father, but to some other nearly related person, especially an uncle, or to some other relatives as well as to the father. In any case the price is to be regarded as a compensation for the loss sustained in the giving up of the girl, and as a remuneration for the expenses incurred in her maintenance till the time of her marriage. Sometimes, as among several negro peoples, daughters are trained for the purpose of being disposed of at a profit; but this is a modern invention, irreconcilable with savage ideas. Thus, among the Kafirs, the practice of making an express bargain about women hardly prevailed in the first quarter of this century, and the verb applied to the act of giving cattle for a girl, according to Mr. Shooter, involves not the idea of an actual trade, but rather that of reward for her birth and nurture.

To most savages there seems nothing objectionable in marriage by purchase. On the contrary, Mr. Bancroft states that the Indians in Columbia consider it in the highest degree disgraceful to the girl's family, if she is given away without a price; and, in certain tribes of California, "the children of a woman for whom no money was paid are accounted no better than bastards, and the whole family are contemned." It was left for a higher civilization to raise women from this state of debasement. In the next chapter we shall consider the process by which marriage ceased to be a purchase contract, and woman an object of trade.

It would be easy to adduce numerous instances of savage and barbarous tribes among whom a girl is far from having the entire

disposal of her own hand. Being regarded as an object of property, she is treated accordingly.

Among many peoples the female children are usually "engaged" in their earliest youth. Concerning the Eskimo to the north of Churchill, Franklin states that, "as soon as a girl is born, the young lad who wishes to have her for a wife goes to her father's tent and proffers himself. If accepted, a promise is given which is considered binding, and the girl is delivered to her betrothed at the proper age." Early betrothals are among the established customs of the Chippeways, Columbians, Botocudos, Patagonians, and other American peoples. Among the African Marutse, the children "are often affianced at an early age, and the marriage is consummated as soon as the girl arrives at maturity." The Negroes of the Gold Coast, according to Bosman, often arranged for the marriage of infants directly after birth; whilst, among the Bushmans, Bechuanas, and Ashantees, children are engaged when they are still in the womb, in the event of their proving to be girls.

In Australia, too, girls are frequently promised in early youth, and sometimes before they are born. The same is the case in New Guinea, New Zealand, Tahiti, and many other islands of the South Sea, as also among several of the tribes inhabiting the Malay Archipelago. Mariner supposed that, in Tonga, about one-third of the married women had been thus betrothed. In British India infant-marriage has hitherto been a common custom; and all peoples of the Turkish stock, according to Professor Vámbéry, are in the habit of betrothing babies. So also are the Samoyedes and Tuski; and, among the Jews of Western Russia, parents betroth the children whom they hope to have.

Among some peoples, it is the mother, brother, or maternal uncle, who has the chief power of giving a girl in marriage. In Timor-laut, Mr. Forbes says, "nothing can be done of such import as the disposal of a daughter without the advice, assistance, and witness of all the villagers, women and youths being admitted as freely to speak as the elder males;" and in West Australia, according to Mr. Oldfield, the consent of the whole tribe is necessary for a girl's marriage. Yet such cases are no doubt rare exceptions, and give us no right to conclude that there

ever was a time when children were generally considered the property of the tribe, or of their maternal kinsfolk.

It would, however, be a mistake to suppose that, among the lower races, women are, as a rule, married without having any voice of their own in the matter. Their liberty of selection, on the contrary, is very considerable, and, however down-trodden, they well know how to make their influence felt. Thus, among the Indians of North America, numberless instances are given of woman's liberty to choose her husband. Schoolcraft asserts that their marriages are brought about "sometimes with, and sometimes against, the wishes of the graver and more prudent relatives of the parties," the marital rite consisting chiefly in the consent of the parties. Heckewelder quotes instances of Indians who committed suicide because they had been disappointed in love, the girls on whom they had fixed their choice, and to whom they were engaged, having changed their minds, and married other lovers. Among the Kaniagmuts, Thlinkets, and Nutkas, the suitor has to consult the wishes of the young lady. Among the Chippewas, according to Mr. Keating, the mothers generally settle the preliminaries to marriage without consulting the children; but the parties are not considered husband and wife till they have given their consent. The Atkha Aleuts occasionally betrothed their children to each other, but the marriage was held to be binding only after the birth of a child. Among the Creeks, if a man desires to make a woman his wife "conformably to the more ancient and serious custom of the country," he endeavours to gain her own consent by regular courtship. Among the Pueblos, &c., "no girl is forced to marry against her will, however eligible her parents may consider the match."

As to the South American Guanás, Azara states, "Aucune femme ne consent à se marier, sans avoir fait ses stipulations préliminaires très-détaillées avec son prétendu, et avec son père et ses parents, à l'égard de leur genre de vie réciproque." In Tierra del Fuego, according to Lieutenant Bove, the eagerness with which the women seek for young husbands is surprising, but even more surprising is the fact that they nearly always attain their ends. Speaking of the same people, Mr. Bridges says, "It frequently happens that there is insuperable aversion on

the girl's part to her husband, and she leaves him, and if she persists in hating him she is then given to one she likes." It is, indeed common in America for a girl to run away from a bridegroom forced upon her by the parents; whilst, if they refuse to give their daughter to a suitor whom she loves, the couple elope. Thus, among the Dacotahs, as we are told by Mr. Prescott, "there are many matches made by elopement, much to the chagrin of the parents."

In Australia it is the rule that a father alone can give away his daughter, and, according to Mr. Curr, the woman herself, has no voice in the selection of her husband. But, with reference to the Narrinyeri, Mr. Taplin states that, "although the consent of a female is not considered a matter of the first importance, as, indeed is the case in many uncivilized nations, yet it is always regarded as desirable." Among the Kurnai, according to Mr. Howitt, she decidedly enjoys the freedom of choice. Should the parents refuse their consent, she goes away with her lover, and if they can remain away till the girl is with child she may, it is said, expect to be forgiven. Otherwise it may become necessary for them to elope two or three times before they are pardoned, the family at length becoming tired of objecting. Mr. Mathews asserts that, with varying details, marriage by mutual consent will be found among other tribes also, though it is not completed except by means of a runaway match. Elopement undertaken with the consent of the woman is, indeed, and has been, a recognized institution among at least some of the aboriginal tribes in Australia. Among the Kurnai it is the rule.

The Maoris have a proverb, "As a kahawai (a fish which is very particular in selecting the hook that most resembles its food) selects the hook which pleases it best out of a great number, so also a woman chooses one man out of many." Mariner supposed that, in Tonga, perhaps two-thirds of the girls had married with their own free consent. Concerning the natives of Arorae, Mr. Turner says, "In choosing a husband the lady sat in the lower room of the house, and over her head were let down through the chinks of the floor of the upper room two or three cocoa-nut leaflets, the ends of which were held by her lovers. She pulled at one, and asked whose it was. If the reply was not in the voice

of the young man she wished to have, she left it and pulled at another leaf, and another, until she found him, and then pulled it right down. The happy man whose leaf she pulled down sat still, while the others slunk away." In the Society Islands, the women of the middle and lower ranks had the power to choose husbands according to their own wishes; and that the women of the highest class sometimes asserted the same right appears from the addresses a chief of Eimeo had to pay to the object of his attachment before she could be induced to accept his offer. In Radack, "marriages depend on a free convention," as seems to be generally the case in Micronesia. In the New Britain Group, according to Mr. Romilly, after the man has worked for years to pay for his wife, and is finally in a position to take her to his house, she may refuse to go, and he cannot claim back from the parents the large sums he has paid them in yams, cocoa-nuts, and sugar-canes. With reference to the New Caledonian girl, M. Moncelon remarks, "Elle est consultée quelquefois, mais souvent est forcée l'obéir. Alors elle fuit à chaque instant pour rejoindre l'homme qu'elle préfère."

In the Indian Archipelago, according to Professor Wilken, most marriages are contracted by the mutual consent of the parties. Among the Dyaks, "the unmarried girls are at perfect liberty to choose their mates." In some parts of Java, much deference is paid to the bride's inclinations, and, among the Minahassers of Celebes, courtship or love-making "is always strictly an affair of the heart and not in any way dependent upon the consent or even wish of the parents." Similar statements are made by Riedel with reference to several of the smaller islands. Among the Rejangs of Sumatra, if a young man runs away with a virgin without the consent of her father, he does not act contrary to the laws of the country; and, if he is willing to make the usual payments afterwards, the woman cannot be reclaimed by her father or other kinsfolk.

In Burma, "the choice of marriageable girls is perfectly free," and marriages are occasionally contracted even in direct opposition to the parents. Among the Shans, mutual consent is required to constitute a valid union, and, regarding the Chittagong Hill tribes, Captain Lewin says that the women's "power of

selecting their own husband is to the full as free as that enjoyed by our own English maidens." The same is the case with many, perhaps most, of the uncivilized tribes of India. The young couple often settle the affair entirely between themselves, even though marriages are ostensibly arranged by the parents, or the parents, before they give their children in marriage, consult them, and, as a rule, follow their likings. In case of parental objection, elopements frequently take place. Among the Kukis, a girl who runs away from a husband she does not like is not thought to act wrongly in doing so. Among the aboriginal tribes of China, the Ainos, Kamchadales, Jakuts, Ossetes, &c., the daughter's inclinations are nearly always consulted. And, in Corea, mutual choice was the ancient custom of the country.

Turning to Africa, we find that, among the Touaregs, a girl may select out of her suitors the one whom she herself prefers. As to the West African negroes, Mr. Reade informed Mr. Darwin that "the women, at least among the more intelligent Pagan tribes, have no difficulty in getting the husbands whom they may desire, although it is considered unwomanly to ask a man to marry them." The accuracy of this statement is confirmed by several travellers, and it seems to hold good for other parts of Africa. Among the Shulis, according to Dr. Felkin, the women have a voice in the selection of their husbands. The Mádi girls, says Emin Pasha, enjoy great freedom, and are able to choose companions to their liking. Among the Marutse, "free women who have not been given away or sold as slaves are allowed to choose what husbands they please." The young Kafirs endeavour generally at first to gain the consent of the girls, for it is, as Mr. Leslie remarks, "a mistake to imagine that a girl is sold by her father in the same manner, and with the same authority, with which he would dispose of a cow." And, among the Hottentots and Bushmans, when a girl has grown up to womanhood without having previously been betrothed, her lover must gain her approbation, as well as that of the parents.

In works by ancient writers we find statements of the same kind. Among the Cathæi, according to Strabo, the girls chose their husbands, and the young men their wives; and the same is said by Herodotus of the women of Lydia. In Indian and old

Scandinavian tales virgins are represented as having the power to dispose of themselves freely. Thus it was agreed that Skade should choose for herself a husband among the Asas, but she was to make her choice by the feet, the only part of their persons she was allowed to see.

In view of such facts it is impossible to agree with M. Letourneau that, during a very long period, woman was married without her wishes being at all consulted. There can be no doubt that, under more primitive conditions, she was even more free in that respect than she is now among most of the lower races. At present a daughter is very commonly an object of trade, and the more exclusively she is regarded from this point of view, the less, of course, are her own likings taken into account. Among the Bedouins of Mount Sinai, who have marriage by purchase, no father thinks it necessary to consult his daughter before selling her, whereas, among the Arabs of the eastern plain, the Aenezes, &c., according to Burckhardt, "the father never receives the price of the girl, and therefore some regard is paid to her inclinations." But it will be shown that marriage by purchase forms a comparatively late stage in the history of the family relations of mankind, owing its origin to the fact that daughters are valuable as labourers, and therefore not given away for nothing. Speaking of the Gippsland natives, Mr. Fison says, "The assertion that women 'eat and do not hunt,' cannot apply to the lower savages. On the contrary, whether among the ruder agricultural tribes or those who are dependent on supplies gathered from 'the forest and the flood,' the women are food-providers, who supply to the full as much as they consume, and render valuable service into the bargain. In times of peace, as a general rule they are the hardest workers and the most useful members of the community." Now, the Australians, although a very rude race, have advanced far beyond the original state of man. There is no reason to doubt that, among our earliest human ancestors, the possession of a woman was desired only for the gratification of the man's passions. It may be said generally that in a state of nature every grown-up individual earns his own living. Hence there is no slavery, as there is, properly speaking, no labour. A man in the earliest times had no reason, then, to retain

his full-grown daughter; she might go away, and marry at her pleasure. That she was not necessarily gained by the very first male, we may conclude from what we know about the lower animals. As Mr. Darwin remarks, the female generally, or at least often, exerts some choice. She can in most cases escape, if wooed by a male who does not please her, and when pursued, as commonly occurs, by several males, she seems often to have the opportunity, whilst they are fighting with one another, of going away with, or at least of temporarily pairing with, some one male.

It might be supposed that at a later stage, when family ties grew stronger, and bride-stealing became a common way of concluding a marriage, the consent of the woman in the event of capture would be quite out of the question. Certainly it must generally have been so when she fell as a booty into the hands of an enemy. But women thus captured may in many cases have been able to escape from the husbands forced on them, and to return to their own, or some friendly neighbouring, tribe. Very frequently, however, bride-stealing seems to have taken place with the approval of the girl, there being no other way in which the match could be concluded if her parents were unwilling to agree to it. It is a common mistake, as Mr. Howitt remarks, to confound marriage by capture and marriage by elopement. They are essentially different, the one being effected without, the other with, the woman's consent. Thus, among the Australians, many, perhaps most, cases of so-called bride-stealing come under the head of elopements.

Something remains to be said as to the position of sons among uncivilized peoples. When young, they are everywhere as much dependent on the parents, or at least on the father, as are their sisters. A boy may be sold, bartered away, or even killed, if his father thinks proper. That the power of life and death, under certain circumstances, rests with the tribe is a matter of little importance in this connection. But as soon as the young man grows up, the father, as a rule, has no longer any authority over him, whereas a woman is always more or less in a state of dependence, marriage implying for her a change of owner only. Among the Australians, says Mr. Curr, "sons become independent when they have gone through the ceremonies by which they attain to the

status of manhood." The full-grown man is his own master; he is strong enough not to be kept in check by his father, and, being able to shift for himself, he may marry quite independently of the old man's will.

It often happens, indeed, as we have seen, that parents betroth their children when they are young. But, if such an engagement is not always binding even for the woman, it is of course all the less so for the man. "The choice among the Kalmucks," Liadov says, "belongs entirely to the parents. Still, there is no constraint upon this point, and, if the son declares that the selection of his parents displeases him, there is no further question about the matter."

Moreover, marriage contracts are concluded among certain peoples by the parents of the parties, even when these are full-grown. Among the Iroquois, according to Mr. Morgan, the mother, when she considered her son of a suitable age for marriage, looked about for a maiden whom she thought likely to accord with him in disposition and temperament, and remonstrance or objection on the part of the children was never attempted. Among the Basutos, the choice of "the great wife" is generally made by the father. And, in many of the uncivilized tribes of India, parents are in the habit of betrothing their sons. In certain cases, the parents merely go through a form of selection, the matter having already been really settled by the parties concerned; and usually a man who has been induced to marry a woman he does not like, may divorce her and choose another according to his taste. Yet, speaking of the Kisáns, Colonel Dalton says that "there is no instance on record of a youth or maiden objecting to the arrangement made for them." The paternal authority among these tribes of India implies, indeed, a family system of higher type than we are accustomed to find among wild races; it approaches the *patria potestas* of the ancient Aryan nations. Thus, among the Kandhs, in each family the absolute authority rests with the house-father; the sons have no property during the father's lifetime, and all the male children, with their wives and descendants, continue to share the father's meal, prepared by the common mother. The father chooses a full-grown woman as a wife for his young son. "In the superior age of the bride," says

Colonel Macpherson, "is seen a proof of the supremacy of the paternal authority amongst this singular people. The parents obtain the wives of their sons during their boyhood, as very valuable domestic servants, and their selections are avowedly made with a view to utility in this character."

Among savages the father's power depends exclusively, or chiefly, upon his superior strength. At a later stage, in connection with a more highly developed system of ancestor-worship, it becomes more ideal, and, at the same time, more extensive and more absolute. Obedience to the father is regarded as a sacred duty, the transgression of which will be punished as a crime against the gods. Indeed, so prevalent has this strengthened authority of the father been among peoples who have reached a relatively high degree of civilization, that it must be regarded as marking a stage in all human history.

The family system of the savage Indians differs widely, in this respect, from that which was established among the ancient inhabitants of Mexico and Peru. Concerning the Mexicans, Clavigero says that "their children were bred to stand so much in awe of their parents, that, even when grown up and married, they hardly durst speak before them." The following was an exhortation of a Mexican to his son:—"Honour all persons, particularly thy parents, to whom thou owest obedience, respect, and service. Guard against imitating the example of those wicked sons, who, like brutes that are deprived of reason, neither reverence their parents, listen to their instruction, nor submit to their correction; because whoever follows their steps will have an unhappy end, will die in a desperate or sudden manner, or will be killed and devoured by wild beasts." A youth was seldom allowed to choose a wife for himself; he was expected to abide by the selection of his parents. Hence it rarely happened that a marriage took place without the sanction of parents or other kinsfolk, and he who presumed to marry without such sanction had to undergo penance, being looked upon as ungrateful, ill-bred, and apostate. The belief was, according to Torquemada, that an act of that kind would be punished by some misfortune. In a province of the Mexican empire, it was even required that

a bridegroom should be carried, that he might be supposed to marry against his inclinations. Touching the Guatemalans, Mr. Bancroft says, "It seems incredible that the young men should have quietly submitted to having their wives picked out for them without being allowed any voice or choice in the matter. Yet we are told that so great was their obedience and submission to their parents, that there never was any scandal in these things." In the greater part of Nicaragua, matches were arranged by the parents; though there were certain independent towns in which the girls chose their husbands from among the young men, while the latter sat at a feast. Again, in Peru, Inca Pachacutec confirmed the law that sons should obey and serve their fathers until they reached the age of twenty-five, and that none should marry without the consent of the parents, and of the parents of the girl, a marriage without this consent being invalid and the children illegitimate.

Similar ideas formerly prevailed, and to some extent are still found, among the civilized nations of the Old World. The Chinese have a maxim that, as the Emperor should have a father's love for his people, so a father should have a sovereign's power over his family. From earliest youth the Chinese lad is imbued with such respect for his parents that it becomes at last a religious sentiment, and forms, as he gets older, the basis of his only creed—the worship of ancestors. Disobedience to parents is looked upon as a sin to be punished with death, whether the offender be an infant or a full-grown son or daughter. And in everything referring to the marriage of the children parents are omnipotent. "From all antiquity in China," Navarette says, "no son ever did, or hereafter will, marry without the consent of his parents." Indeed, according to Mr. Medhurst, it is a universally acknowledged principle in China that no person, of whatever age, can act for himself in matrimonial matters during the lifetime or in the neighbourhood of his parents or near senior kinsfolk. The power of these guardians is so great that they may contract a marriage for a junior who is absent from home, and he is bound to abide by such engagement even though already affianced elsewhere without their privity or consent. The consequence of this system is that, in many cases, the betrothed couple scarcely know each

other before marriage, the wedding being the first occasion on which the man catches a glimpse of his wife's face. In some parts of the Empire children are affianced in infancy.

In Japan, according to Professor Rein, a house-father enjoyed the same extensive rights as the Roman *paterfamilias*—an unlimited power over the person and property of his children. Filial piety is considered the highest duty of man, and not even death or the marriage relation weakens, to any great extent, the hold of a father on a child. "With affection on the one hand, and cunning on the other," says Mr. Griffis, "an unscrupulous father may do what he will. . . . . The Japanese maiden, as pure as the purest Christian virgin, will, at the command of her father, enter the brothel to-morrow, and prostitute herself for life. Not a murmur escapes her lips as she thus filially obeys." Marriages are almost invariably arranged by the parents or nearest kinsfolk of the parties, or by the parties themselves with the aid of an agent or middleman known as the "nakōdo," it being considered highly improper for them to arrange it on their own account. Among the lower classes, such direct unions are not unfrequent; but they are held in contempt, and are known as "yagō," *i.e.*, "meeting on a moor,"—a term of disrespect showing the low opinion entertained of them. The middleman's duty consists in acquainting each of the parties with the nature, habits, good and bad qualities, and bodily infirmities of the other, and in doing his utmost to bring the affair to a successful conclusion. It seldom happens that the parties immediately interested communicate directly with the middleman; if they have parents or guardians, it is done by these, and, if not, by the nearest relation. The middleman has to arrange for a meeting between the parties, which meeting is known as the "mi ai," literally "see meeting," and, if either party is dissatisfied with the other after this introduction, the matter proceeds no further. But formerly, says Mr. Küchler, "this ante-nuptial meeting was dispensed with in the case of people of very exalted rank, who consequently never saw each other until the bride removed her veil on the marriage day."

Among the ancient Arabs and Hebrews, fathers exercised very great rights over their families. According to the old law

of Jahveism, a father might sell his child to relieve his own distress, or offer it to a creditor as a pledge. Death was the penalty for a child who struck a parent, or even cursed one; though the father himself could not inflict this penalty on his children, but had to appeal to the whole community. How important were the duties of the child to the parents, is shown in the primitive typical relation of Isaac to Abraham, and may, as Ewald remarks, be at once learned from the placing of the law on the subject among the Ten Commandments, and from its position there in immediate proximity to the commands relating to the duties of man towards God. According to Michaelis, there is nowhere the slightest trace of its having been the will of Moses that paternal authority and the subjection of sons should cease after a certain age. A Hebrew father not only disposed of his daughter's hand, but chose wives for his sons,—the selection, however, being sometimes made by the mother.

Herodotus tells us that, in Egypt, if a son was unwilling to maintain his parents, he was at liberty to refuse, whereas a daughter was compelled to assist them, and, on refusal, was amenable to law. But, according to Sir Gardner Wilkinson, the truth of this statement may be questioned. Judging from the marked severity of filial duties among the Egyptians, some of which are distinctly alluded to in the inscriptions at Thebes, we may conclude that, in Egypt, much more was expected from a son than in any civilized nation of the present day. Among the modern Egyptians it is considered highly indecorous for a son to sit down in the presence of his father without permission. . . . .—E. WESTERMARCK, *History of Human Marriage*, 290–402; 213–29 (Macmillan, 1891).

MONOGAMY

Evidently, as tested by the definiteness and strength of the links among its members, the monogamic family is the most evolved. In polyandry the maternal connexion is alone distinct, and the children are but partially related to one another. In polygyny both the maternal and paternal connexions are distinct; but while some of the children are fully related, others are related on the paternal side only. In monogamy not only

are the maternal and paternal connexions both distinct, but all the children are related on both sides. The family cluster is thus held together by more numerous ties; and beyond the greater cohesion so caused, there is an absence of those repulsions caused by the jealousies inevitable in the polygynic family.

This greater integration characterizes the family as it ramifies through successive generations. Definiteness of descent from the same father, grand-father, great grand-father, etc., it has in common with polygyny; but it has also definiteness of descent from the same mother, grand-mother, great grand-mother, etc. Hence its diverging branches are joined by additional bonds. Where, as with the Romans, there is a legally-recognized descent in the male line only, so that out of the *cognates* constituting the whole body of descendants, only the *agnates* are held to be definitely related, the ramifying family-stock is incompletely held together; but where, as with ourselves, descendants of female members of the family are included, it is completely held together.

How the interests of the society, of the offspring, and of the parents, are severally better subserved by monogamy during those later stages of social evolution characterized by it, needs pointing out only for form's sake.

Though, while habitual war and mortality of males leaves constantly a large surplus of females, polygyny favours maintenance of population; yet, when the surplus of females ceases to be large, monogamy becomes superior in productiveness. For, taking the number of females as measuring the possible number of children to be born in each generation, more children are likely to be born if each man has a wife, than if some men have many wives while others have none. So that after passing a certain point in the decrease of male mortality, the monogamic society begins to have an advantage over the polygynic in respect of fertility; and social survival, in so far as it depends on multiplication, is aided by monogamy. The stronger and more widely ramified family-bonds indicated above, aid in binding the monogamic society together more firmly than any other. The multiplied relationships traced along both lines of descent in all families, which, intermarrying, are ever initiating other double

sets of relationships, produce a close net-work of connexions increasing the social cohesion otherwise caused. Political stability is also furthered in a greater degree. Polygyny shares with monogamy the advantage that inheritance of power in the male line becomes possible; but under polygyny the advantage is partially destroyed by the competition for power liable to arise between the children of different mothers. In monogamy this element of dissension disappears, and settled rule is less frequently endangered. For kindred reasons ancestor-worship has its development aided. Whatever favours stability in the dynasties of early rulers, tends to establish permanent dynasties of deities, with the resulting sacred sanctions for codes of conduct.

Decreased mortality of offspring is a manifest result of monogamy in societies that have outgrown barbarism. It is true that in a barren region like the snow-lands of Asia, the children of a polyandric household, fed and protected by several men, may be better off than those of a monogamic household. Probably, too, among savages whose slave-wives, brutally treated, have their strength overtaxed, as well as among such more advanced peoples as those of Africa, where the women do the field-work as well as the domestic drudgeries, a wife who is one of several, is better able to rear her children than a wife who has no one to share the multifarious labors with her. But as fast as we rise to social stages in which the men, no longer often away in war and idle during peace, are more and more of them occupied in industry—as fast as the women, less taxed by work, are able to pay greater attention to their families, while the men become the bread-winners; the monogamic union subserves better in two ways the rearing of children. Beyond the benefit of constant maternal care, the children get the benefit of concentrated paternal interest.

Still greater are the advantageous effects on the lives of adults, physical and moral. Though in early societies monogamic unions do not beget any higher feelings towards women, or any ameliorations of their lot; yet in later societies they are the necessary concomitants of such higher feelings and such ameliorations. Especially as the system of purchase declines and choice by women becomes a factor, there evolve the sentiments

which characterize the relations of the sexes among civilized peoples. These sentiments have far wider effects than at first appear. How by their influence on the domestic relations they tend to raise the quality of adult life, materially and mentally, is obvious. But they tend in no small degree otherwise to raise the quality of adult life: they create a permanent and deep source of æsthetic interest. On recalling the many and keen pleasures derived from music, poetry, fiction, the drama, etc., all of them having for their predominant theme the passion of love, we shall see that to monogamy, which has developed this passion, we owe a large part of the gratifications which fill our leisure hours.

Nor must we forget, as a further result of the monogamic relation, that in a high degree it favours preservation of life after the reproductive period is passed. Both by the prolonged marital affection which it fosters, and by the greater filial affection evoked under it, declining years are lengthened and their evils mitigated. . . . .—HERBERT SPENCER, *Principles of Sociology*, 1:669–72.

[SEXUAL ANTAGONISM AND TABOO]

"In the beginning, when Twashtri came to the creation of woman, he found that he had exhausted his materials in the making of man, and that no solid elements were left. In this dilemma, after profound meditation, he did as follows. He took the rotundity of the moon, and the curves of creepers, and the clinging of tendrils, and the trembling of grass, and the slenderness of the reed, and the bloom of flowers, and the lightness of leaves, and the tapering of the elephant's trunk and the glances of deer, and the clustering of rows of bees, and the joyous gaiety of sunbeams, and the weeping of clouds, and the fickleness of the winds, and the timidity of the hare, and the vanity of the peacock, and the softness of the parrot's bosom, and the hardness of adamant, and the sweetness of honey, and the cruelty of the tiger, and the warm glow of fire, and the coldness of snow, and the chattering of jays, and the cooing of the *kókila*, and the hypocrisy of the crane, and the fidelity of the *chakrawáka*, and compounding all these together, he made woman and gave her to man. But after one week, man came to him and said: Lord, this creature that

you have given me makes my life miserable. She chatters incessantly and teases me beyond endurance, never leaving me alone; and she requires incessant attention, and takes all my time up, and cries about nothing, and is always idle; and so I have come to give her back again, as I cannot live with her. So Twashtri said: Very well; and he took her back. Then after another week, man came again to him and said: Lord, I find that my life is very lonely, since I gave you back that creature. I remember how she used to dance and sing to me, and look at me out of the corner of her eye, and play with me, and cling to me; and her laughter was music, and she was beautiful to look at, and soft to touch; so give her back to me again. So Twashtri said: Very well; and gave her back again. Then after only three days, man came back to him again and said: Lord, I know not how it is; but after all I have come to the conclusion that she is more of a trouble than a pleasure to me; so please take her back again. But Twashtri said: Out on you! Be off! I will have no more of this. You must manage how you can. Then man said: But I cannot live with her. And Twashtri replied: Neither could you live without her. And he turned his back on man, and went on with his work. Then man said: What is to be done? for I cannot live either with her or without her."

This extract from a beautiful Sanscrit story illustrates a conception of the relations of man and woman, which often recurs in literature. The same conception, due ultimately to that difference of sex and of sexual characters which renders mutual sympathy and understanding more or less difficult, is characteristic of mankind in all periods and stages of culture. Woman is one of the last things to be understood by man; though the complement of man and his partner in health and sickness, poverty and wealth, woman is different from man, and this difference has had the same religious results as have attended other things which man does not understand. The same is true of woman's attitude to man. In the history of the sexes there have been always at work the two complementary physical forces of attraction and repulsion; man and woman may be regarded, and not fancifully, as the highest sphere in which this law of physics operates; in love the two sexes are drawn to each other by an irresistible

sympathy, while in other circumstances there is more or less of segregation, due to and enforced by human ideas of human relations.

The remarkable facts which follow show the primitive theory and practice of this separation of the sexes. Both in origin and results the phenomena are those of Taboo, and hence I have applied to these facts the specific term of Sexual Taboo. At first sight this early stage of the relations of men and women may cause surprise, but when one realises the continuity of human ideas, and analyses one's own consciousness, one may find there in potentiality, if not actualised by prejudice, the same conception, though perhaps emptied of its religious content.

In Nukahiva if a woman happens to sit upon or even pass near an object which has become *tabu* by contact with a man, it can never be used again, and she is put to death. In Tahiti a woman had to respect those places frequented by men, their weapons and fishing implements; the head of a husband or father was *sacred* from the touch of woman, nor might a wife or daughter touch any object that had been in contact with these *tabued* heads, or step over them when their owners were asleep. In the Solomon Islands a man will never pass under a tree fallen across the path, because a woman may have stepped over it before him. In Siam it is considered unlucky to pass under women's clothes hung out to dry. It is *degrading* to a Melanesian chief to go where women may be above his head; boys also are forbidden to go underneath the women's bed-place. Amongst the Karens of Burmah going under a house when there are females within is avoided; and in Burmah generally it is thought an *indignity* to have a woman above the head; to prevent which the houses are never built with more than one storey. This explanation of an architectural peculiarity is doubtless *ex post facto*. Amongst the people of Rajmahal, if a man be detected by a woman sitting on her cot and she complains of the impropriety, he pays her a fowl as fine, which she returns; on the other hand, if a man detects a woman sitting on his cot, he kills the fowl which she produces in answer to his complaint, and sprinkles the blood on the cot to purify it, after which she is pardoned. In Cambodia a wife may never use the pillow or mattress of her husband,

because "she would hurt his happiness thereby." In Siam the wife has a lower pillow "to remind her of her inferiority." This reason is possibly late. Amongst the Barea man and wife seldom share the same bed, the reason they give is, that if they sleep together the breath of the wife will render her husband weak. Amongst the Lapps no grown woman may touch the hinder part of the house, which is sacred to the sun. No woman may enter the house of a Maori chief. Amongst the Kaffas of East Africa husband and wife see each other only at night, never meeting during the day. She is secluded in the interior portion of the house while he occupies the remainder. "A public resort is also set apart for the husband, where no woman is permitted to appear. A penalty of three years' imprisonment attaches to an infringement of this rule." Observers have noted "the haughty contempt" shown by Zulus for their wives. Men and women rarely are seen together; if a man and his wife are going to the same place, they do not walk together. In some Redskin tribes and amongst the Indians of California a man never enters his wife's wigwam except under cover of the darkness; and the men's club-house may never be entered by women. The Bedouin tent is divided into two compartments for the men and women respectively. No man of good reputation will enter the women's part of the tent or even be seen in its shadow. In Nukahiva the houses of important men are not accessible to their own wives, who live in separate huts. Amongst the Samoyeds and Ostyaks a wife may not tread in any part of the tent except her own corner; after pitching the tent she must fumigate it before the men enter. In Fiji husbands are as frequently away from their wives as with them; it is not, in Fijian society, thought well for a man to sleep regularly at home. Another account states that "it is quite against Fijian ideas of delicacy that a man ever remains under the same roof with his wife or wives at night." He may not take his night's repose anywhere except at one of the public *bures* of his town or village. The women and girls sleep at home. "*Rendezvous* between husband and wife are arranged in the depths of the forest, unknown to any but the two." All the male population, married or unmarried, sleep at the *bures*, or club-houses, of which there are generally two in each village. Boys

till of age have a special one. From another account we learn that women are not allowed to enter a *bure,* which is also used as a lounge by the chiefs. In New Caledonia a peculiarity of conjugal life is that men and women do not sleep under the same roof. The wife lives and sleeps by herself in a shed near the house. "You rarely see the men and women talking or sitting together. The women seem perfectly content with the companionship of their own sex. The men, who loiter about with spears in a most lazy fashion, are seldom seen in the society of the opposite sex." No Hindu female may enter the men's apartments. In New Guinea the women sleep in houses apart, near those of their male relatives. The men assemble for conversation and meals in the *marea,* a large reception-house, which women may not enter. Amongst the Nubians each family has two dwelling-houses, one for the males, the other for the females. In the Sandwich Islands there were six houses connected with every great establishment; one for worship, one for the men to eat in, another for the women, a dormitory, a house for *kapa*-beating, and one where at certain intervals the women might live in seclusion. In the Caroline Islands a chief's establishment has one house for the women, a second for eating, and a third for sleeping. In the Admiralty Islands there is a house reserved in each village for the use of women, both married and single, while the single men live together in a separate building. The Shastika Indians of California have a town-lodge for men and another for women. Other Californian tribes possess the first institution; the women may not enter the men's lodges. The centre of Bororo life is the *Baitó,* the men's house, where all the men really live; the family huts are nothing more than a residence for the women and children. Amongst the Bakairí and the Schingú tribes generally, women may never enter the men's club-house, where the men spend most of their time. In the Solomon Islands women may not enter the men's *tambu* house, nor even cross the beach in front of it. In Ceram women are forbidden to enter the men's club-house. In New Britain there are two large houses in each village, one for men, the other for women: neither sex may enter the house of the other. In the Marquesas Islands the *ti* where the men congregate and spend most of their time is taboo to women, and

protected by the penalty of death from the imaginary pollution of a woman's presence; the chiefs never trouble about any domestic affairs. In the Pelew Islands there is "a remarkable separation of the sexes." Men and women hardly live together, and family life is impossible. The segregation is political as well as social. In the Society and Sandwich Islands the female sex was isolated and humiliated by *tabu*, and in their domestic life the women lived almost entirely by themselves. In Uripiv (New Hebrides) there is a curious segregation of the sexes, beginning, at least in one respect, soon after a boy is born. In Rapa (Tubuai Islands) all men are *tabu* to women. In Seoul, the capital of Corea, "they have a curious curfew law called *pem-ya*. A large bell is tolled at about 8 P. M. and 3 A. M. daily, and between these hours only are women supposed to appear in the streets. In the old days men found in the streets during the hours allotted to women were severely punished, but the rule has been greatly relaxed of late years." "Family life, as we have it, is utterly unknown in Corea." The Ojebway, Peter Jones, thus writes of his own people: "I have scarcely ever seen anything like social intercourse between husband and wife, and it is remarkable that the women say little in the presence of the men." In Senegambia the negro women live by themselves, rarely with their husbands, and their sex is virtually a clique. In Bali to speak *tête-à-tête* with a woman is absolutely forbidden. In Egypt a man never converses with his wife, and in the tomb they are separated by a wall, though males and females are not usually buried in the same vault.

Some cases of this complementary result, solidarity of sex, have been noticed, and others will occur in various connections. It is practically universal in all stages of culture, even the highest. Amongst the Bedouins of Libya women associate for the most part with their own sex only. In Morocco women are by no means reserved when by themselves, nor do they seek to cover their faces. Amongst the Gauchos of Uruguay women show a marked tendency to huddle together. Sexual solidarity is well brought out in the following. Amongst the extinct Tasmanians if a wife was struck by her husband, the whole female population would come out and bring the "rattle of their tongues to bear upon the brute." When ill-treated, the Kaffir wife can claim an

asylum with her father, till her husband has made atonement. "Nor would many European husbands like to be subjected to the usual discipline on such occasions. The offending husband must go in person to ask for his wife. He is instantly surrounded by the women of the place, who cover him at once with reproaches and blows. Their nails and fists may be used with impunity, for, it is the day of female vengeance, and the belaboured delinquent is not allowed to resist. He is not permitted to see his wife, but is sent home, with an intimation of what cattle are expected from him, which he must send before he can demand his wife again." Amongst the Kunama the wife has an agent who protects her against her husband, and fines him for ill-treatment. She possesses considerable authority in the house, and is on equal terms with her husband. Amongst the Beni-Amer women enjoy considerable independence. To obtain marital privileges, the husband has to make his wife a present of value. He must do the same for every harsh word he uses, and is often kept a whole night out of doors in the rain, until he pays. The women have a strong *esprit de corps;* when a wife is ill-treated the other women come in to help her; it goes without saying that the husband is always in the wrong. The women express much contempt for the men, and it is considered disgraceful in a woman to show love for her husband.

The first of these examples shows the length to which religious ideas may carry this segregation, the last is one of many cases in which the solidarity of sex is seen. This is well brought out in examples of club-life, and there is here a close parallel to be found, not merely humorous, in the institution and etiquette of the modern club. The same biological tendency is behind both the modern and the primitive institution, though the later one is no longer supported by religious ideas. Again, sexual differentiation often develops into real antagonism. The attempts of the Indians of California to keep their women in check show how the latter were struggling up to equality. An account of the Hottentots represents that the women, though ill-treated and forced to do harder work, can defend themselves and avenge their wrongs. A Poul (Fulah) governs his wives by force, but they recoup themselves when they get the chance. The Indian

of Brazil has a wholesome dread of his wives, and "follows the maxim of *laissez faire* with regard to their intrigues." Amongst the Wataveita fire-making is not revealed to women, "because," say the men, "they would then become our masters." The Miris will not allow their women to eat tiger's flesh, lest it should make them too strong-minded. The Fuegians celebrate a festival, *Kina*, in commemoration of their revolt against the women, "who formerly had the authority, and possessed the secrets of sorcery." In the Dieri tribe of South Australia men threaten their wives, should they do anything wrong, with the "bone," the instrument of sorcery, which, when pointed at the victim, causes death; "this produces such dread among the women, that mostly instead of having a salutary effect, it causes them to hate their husbands." The Pomo Indians of California "find it very difficult to maintain authority over their women." A husband often terrifies his wife into submission by personating an ogre; after this she is usually tractable for some days. Amongst the Tatu Indians of California, the men have a secret society, which gives periodic dramatic performances, with the object of keeping the women in order. The chief actor, disguised as a devil, charges about among the assembled squaws. The Gualala and Patwin Indians have similar dances, performed by the assembled men, to show the women the necessity of obedience. In Africa the anxious attempts of the men to keep the women down have been noted. The adult males in South Guinea have a secret association, *Nda*, whose object is to keep the women, children, and slaves in order. The *Mumbo-Jumbo* of the Mandingos is well known. The same performer, who represents Mumbo-Jumbo, has also the duty of keeping the sexes apart for the forty days after circumcision. Other instances of associations to keep the women in subjection are the *Egbo* in Calabar, *Oro* in Yoruba, the *Purro, Semo,* and varieties of *Egbo* on the west coast, the *Bundu* amongst the Bullamers. Women in their turn form similar associations amongst themselves, in which they discuss their wrongs and form plans of revenge. Mpongwe women have an institution of this kind, which is really feared by the men. Similarly amongst the Bakalais and other African tribes.

The way in which each sex is self-centered is also illustrated

by the natural practice that women worship female, and men male deities. This needs no illustration, but a very instructive case may be quoted, which comes from ancient Roman life. When husband and wife quarrelled, they visited the shrine of the goddess *Viriplaca* on the Palatine. After opening their hearts in confession, they would return in harmony. This "appeaser of the male sex" was regarded as *domesticæ pacis custos*. Similarly, Bakalai women have a tutelar spirit, which protects them against their male enemies and avenges their wrongs. According to the Greenlanders, the moon is a male and the sun a female spirit; the former rejoices in the death of women, while the latter has her revenge in the death of men. All males, therefore, keep within doors during an eclipse of the sun, and all females during an eclipse of the moon. In the Pelew Islands the *kalids* of men are quiet and gentlemanly; it is those of women that make disturbances, and inflict disease and death on members of the family. The same hostility makes use of the system of sex-totems. In the Port Lincoln tribe a small kind of lizard, the male of which is called *Ibirri*, and the female *Waka*, is said to have divided the sexes in the human species, "an event which would appear not to be much approved of by the natives, since either sex has a mortal hatred against the opposite sex of these little animals, the men always destroying the *Waka* and the women the *Ibirri*." In the Wotjobaluk tribe it is believed that the "life of *Ngunungunut* (the bat) is the life of a man, and the life of *Yartatgurk* (the nightjar) is the life of a woman;" when either is killed, a man or woman dies. Should one of these animals be killed, every man or every woman fears that he or she may be the victim; and this gives rise to numerous fights. "In these fights, men on one side, and women on the other, it was not at all certain who would be victorious, for at times the women gave the men' a severe drubbing with their yam-sticks, while often the women were injured or killed by spears." In some Victorian tribes the bat is the man's animal, and they "protect it against injury, even to the half-killing of their wives for its sake." The goatsucker belongs to the women, who protect it jealously. "If a man kills one, they are as much enraged as if it was one of their children, and will strike him with their long

poles." The *mantis* also belongs to the men and no woman dares kill it.

Such segregation of the sexes has influenced language. In Madagascar there are terms proper for a woman to use to her own sex, others for women to men, and for men to women. Amongst the Guaycurus the women have many words and phrases peculiar to themselves, and never employed by men; the reason being that the women are "barred" by the men. So in Surinam. The proper Fijian term for a newly circumcised boy is *teve,* which may not be uttered when women are present, in which case the word *kula* is used; and there are many words in the language which it is *tambu* to utter in female society. In Micronesia many words are tabooed for men when conversing with women. In Japan female writing has quite a different syntax and many peculiar idioms; the Japanese alphabet possesses two sets of characters, *katakana* for the use of men, and *hiragana* for women. In Fiji, again, women make their salutations in different words from those of men. In the language of the Abipones some words vary according to sex. The island Caribs have two distinct vocabularies, one used by men and by women when speaking to men, the other used by women when speaking to each other, and by men when repeating in *oratio obliqua* some saying of the women. Their councils of war are held in a secret dialect or jargon, in which the women are never initiated. It has been suggested that this inconvenient custom, according to which a Carib needs to know, like Ennius, three languages, is due to exogamy, husband and wife retaining the languages of their original tribes respectively. This explanation, however, does not account for the martial dialect, and has been refuted by Mr. Im Thurn on other grounds. Even in cases where this explanation may hold, this cause is not the ultimate origin of the custom, but merely carries on an existing practice. Thus in some tribes of Victoria, the marriage-system is organized exogamy, but the inconvenience of sexual taboos has led to the use of an artificial language or "turn-tongue." Similar phenomena occur in all stages of culture, and in modern Europe sexual separation to some extent still influences popular language, women and men respectively using certain terms peculiar to each sex.

In connection with names, sexual taboo has developed a prohibition which has had a peculiar influence upon many languages. A Hindu wife is never allowed to mention the name of her husband. She generally speaks of him, therefore, as "the master" or "man of the house." Amongst the Barea the wife may not utter her husband's name. Amongst the Kirgiz the women may not utter the names of the male members of the household, to do so being "indecent." A Zulu woman may not call her husband by his name, either when addressing him or when speaking of him to others; she must use the phrase "father of so-and-so." This particularly applies to the *i-gama* (real name). Further, the women may not use the interdicted words in their ordinary sense. Consequently they are obliged to alter words and phrases which contain the prohibited sounds. This has had considerable influence upon the language, and the women have a large vocabulary of their own. Any woman transgressing the rule is accused of witchcraft by the "doctor," and punished with death. This prohibition on names belongs to the *hlonipa* system, and the altered vocabulary of the women, which is unintelligible to the men, is called *ukuteta kwabapzi,* "women's language." In the Solomon Islands men show considerable reluctance to give the names of women, and when prevailed upon to do so, pronounce them in a low tone, as if it were not proper to speak of them to others. In the Pelew Islands men are not allowed to speak openly of married women, nor to mention their names. Amongst the Todas there is some delicacy in mentioning the names of women at all; they prefer to use the phrase "wife of so-and-so." A Servian never speaks of his wife or daughter before men. Amongst the Nishinams of California a husband never calls his wife by name on any account; should he do so she has the right to get a divorce. In this tribe no one can be induced to divulge his own name. Dr. Frazer has explained this widespread reluctance; the name is a vital part of a man, and often regarded as a sort of soul. Sexual taboo has used this idea to form a special duty between men and women, especially husbands and wives. In one or two cases feelings of proprietary jealousy have doubtless had some influence, but as a rule the religious fears as to sexual relations have played the chief part in the prohibition.

Evidence drawn from the respective occupations of the two sexes throws further light upon sexual taboo. Sexual differentiation in primary and secondary sexual characters necessitates some difference of occupation, and the religious ideas of primitive man have emphasised the biological separation.

Amongst the Dacotas custom and superstition ordain that the wife must carefully keep away from all that belongs to her husband's sphere of action. The Bechuanas never allow women to touch their cattle, accordingly the men have to plough themselves. So amongst the Kaffirs, "because of some superstition." Amongst the Todas women may not approach the *tiriêri,* where the sacred cattle are kept, nor the sacred *palâls.* In Guiana no woman may go near the hut where *ourali* is made. In the Marquesas Islands the use of canoes is prohibited to the female sex by *tabu;* the breaking of the rule is punished with death. Conversely, amongst the same people, *tapa*-making belongs exclusively to women; when they are making it for their own headdresses it is *tabu* for men to touch it. In Nicaragua all the marketing was done by women. A man might not enter the market or even see the proceedings, at the risk of a beating. In New Caledonia it is considered *infra dig.* for the men to perform manual labour, at any rate in the neighbourhood of the settlement; such work is done by women only. In Samoa, where the manufacture of cloth is allotted solely to the women, it is a degradation for a man to engage in any detail of the process. In the Andaman Islands the performance by men of duties supposed to belong to women only, is regarded as *infra dig.* An Eskimo thinks it an indignity to row in an *umiak,* the large boat used by women. The different offices of husband and wife are also very clearly distinguished; for example, when he has brought his booty to land, it would be a stigma on his character if he so much as drew a seal ashore, and, generally, it is regarded as scandalous for a man to interfere with what is the work of women. In British Guiana cooking is the province of the women; on one occasion when the men were perforce compelled to bake, they were only persuaded to do so with the utmost difficulty, and were ever after pointed at as old women. Exactly the same feelings subsist in the highest civilisations.

The chief occupations of the male sex in those stages of culture with which we have principally to deal are hunting and war. The supreme importance of these occasions has been referred to above, and is expressed by such terms as the Polynesian *tabu*. These terms generally imply rules and precautions intended to secure the safety and success of the warrior or hunter, which form sometimes a sort of system of "training." Among these regulations the most constant is that which prohibits every kind of intercourse with the female sex. Thus in New Zealand a man who has any important business on hand, either in peace or war, is *tapu* and must keep from women. On a war party men are *tapu* to women, and may not go near their wives until the fighting is over. In South Africa before and during an expedition men may have no connection with women. Nootka Indians before war abstain from women. In South-East New Guinea for some days before fighting the men are "sacred," *helega,* and are not allowed to see or approach any woman. A Samoyed woman is credited with the power of spoiling the success of a hunt. Amongst the Ostyaks harm befalls the hunter either from the ill-wishes of an enemy or the vicinity of a woman. Amongst the Ahts whale-fishers must abstain from women. A Motu man before hunting or fishing is *helega;* he may not see his wives, else he will have no success. North American Indians both before and after war refrain "on religious grounds" from women. "Contact with females makes a warrior laughable, and injures, as they believe, his bravery for the future." Accordingly the chiefs of the Iroquois, for instance, remain as a rule unmarried until they have retired from active warfare. The Damaras may not look upon a lying-in woman, else they will become weak and consequently be killed in battle. In the Booandik tribe if men see women's blood they will not be able to fight. In some South American tribes the presence of a woman lately confined makes the weapons of the men weak, and the same belief extends amongst the Tschutsches to hunting and fishing implements. Amongst the Zulus women may not go near the army when about to set out. Old women, however, who are past child-bearing may do so; for such "have become men" and "no longer observe the customs of *hlonipa* in relation to the men."

Woman has generally been debarred more or less from the public life and civil rights of men. This is an extension of the biological difference of occupation, sometimes exaggerated into seclusion amongst polygamous races, and into somewhat of inferiority in martial and feudal societies. We may instance, to go no further, the Australian natives, the Fijians, who have religious grounds for exclusion, the Sumatrans, the Hindus and Muhammadans, and most civilised nations.

Again, women are more often than not, excluded from the religious worship of the community. The Arabs of Mecca will not allow women religious instruction, because "it would bring them too near their masters." According to some theologians of Islam, they have no place in Paradise. The Ansayrees consider woman to be an inferior being without a soul, and "therefore compel her to do all the drudgery and exclude her from religious services." In the Sandwich Islands women were not allowed to share in worship or festivals, and their touch "polluted" offerings to the gods. If a Hindu woman touches an image, its divinity is thereby destroyed and it must be thrown away. The Australians are very jealous lest women or strangers should intrude upon their sacred mysteries: it is death for a woman to look into a *bora*. In Fiji women are kept away from all worship; dogs are excluded from some temples, women from all. In the Gilbert and Marshall Islands and in Tonga, women are excluded from worship. The women of the hill tribes near Rajmahal may not sacrifice nor appear at shrines, nor take part in religious festivals. Amongst the Tschuwashes women dare not assist at sacrifices. Bayeye women may not enter the place of sacrifice, which is the centre of tribal life. Amongst the Gallas women may not go near the sacred *woda*-tree where worship is celebrated. On the east of the Gulf of Papua women are not allowed to approach the temple. In New Ireland women may not enter the temples. In the Marquesas Islands the *hoolah-hoolah* ground, where festivals are held, is *tabu* to women who are killed if they enter or even touch with their feet the shadow of the trees.

Festivals and feasts, dances and entertainments of various character, are similarly often prohibited to women. In the Schingú tribes of Brazil women may not be present at the dances

and feasts. In New Britain women are not allowed to be present at the festivals, and when men are talking of things which women may not hear, the latter must leave the hut. Amongst the Ahts women are never invited to the great feasts. Amongst the Aleuts the women have dances from which the men are excluded; the men have their dances and exclude women. It is regarded as a fatal mischance to see on these occasions one of the opposite sex. Similar exclusion of women from what is regarded as not being their sphere is indeed very widely spread, and is of course found in the highest civilizations. . . . .

In the next place we have to consider the very widely spread rule which insists upon the separation of the sexes, so far as is possible, at those functional crises with which sex is concerned. It is a special result of the ideas of sexual taboo applied to the most obvious sexual differences, primary sexual characters.

During pregnancy there is sometimes avoidance between the wife and the husband, as in the Caroline Islands, where men may not eat with their wives during pregnancy, and in Fiji where a pregnant woman may not wait upon her husband.

At birth, though there are a few cases where the husband attends or assists his wife, the general rule throughout the peoples of the world is that only the female sex may be present. Thus in Buru only old women may be in the room. In South Africa the husband may not see his wife while she is lying-in. Amongst the Basutos the father is separated from mother and child for four days, and may not see them until the medicine man has performed the religious ceremony of "absolution of the man and wife." If this were neglected, it is believed that he would die when he saw his wife.

At puberty it is a widespread rule that neither sex may see the other. Amongst the Narrinyeri boys during initiation are called *narumbe, i. e.* sacred from the touch of women, and everything that they possess or obtain becomes *narumbe* also. Amongst the Basutos no woman may come near the boys during initiation. In New Ireland girls may not be seen by any males except relatives from puberty to marriage, during which time they are kept in cages. . . . .

Even at marriage there is a good deal of separation of the sexes, and actually of the bride and bridegroom for as long as possible. Thus in Amboina none but women may enter the room where the bride sits in state. In the Watubella Islands the men stand on one side with the groom and the women on the other with the bride. The feast is in two parts; the groom and the men eat their "breakfast" separately, and then the bride and the women fall to. At marriage-feasts amongst the Jews of Jerusalem the men sit on one side with the bridegroom, while the bride and the women occupy the opposite side of the room. And generally, at marriage, the bride is escorted by women, and the bridegroom by men.

In these cases there is avoidance between the sexes at sexual crises, as a rule more emphasised than that during ordinary life. The question may be asked—is the latter prohibition merely an extension of the former? When we penetrate to the ideas lying behind both, we shall find these to be identical, and of such a specific character and universal extension that we must suppose the sex-taboos imposed at sexual crises to be simply emphasised results of these ideas, though, as always, such results become through the very continuance of the phenomena to which they apply, further causes for the support of these ideas. Not to anticipate what will be treated of later, it may be pointed out first that perhaps the most widely spread and the most stringent of all sex-taboos has nothing to do with sexual functions—this is the prohibition against eating together. In the second place, in order rightly to estimate the whole of the evidence, it must be borne in mind that these sexual functions are parallel to the various occupations of the respective sexes: in biology and in primitive thought child-bearing is as much a feminine occupation as is the preparation of meals, and the confirmation of a boy as much of a male occupation as is warfare or the chase. Also, it is clear from a survey of the various cases of sexual taboo, first, that the avoidance is of the religious and taboo character; secondly, that men and women are afraid of dangerous results from each other —the fact that we see more of the man's side of the question is an instance of the way in which the male sex has practically monopolised the expression of thought; and thirdly, that where

one sex or the other is particularly liable to danger, as men at war, or women at child-birth, more care is naturally taken to prevent injury from the other sex.

In the taboos against eating together, we shall see an expression of that almost universal preference for solitude, while important physiological functions are proceeding, due ultimately to the instinct of self-preservation in the form of subconscious physiological thought arising from those functions; and in the taboos against one or the other sex in sexual crises the same preference is seen, commuted by sexual solidarity to a preference for the presence of the same sex; and in all forms of the taboo it is evident that to a religious regard for personal security, there has been applied a religious diffidence concerning persons who are more or less unknown, different from what is normal, different from one's self.

So far, then, we may take it that the complementary difference of sex, producing by physiological laws a certain difference of life no less than of function, came in an early stage of mental development to be accentuated by religious ideas, which thus enforced more strongly such separation as is due to nature. The separation thus accentuated by religious conceptions as to sexual difference, is assisted by the natural solidarity of each sex, until there is, as we find so very generally, a prohibition or sex-taboo more or less regularly imposed throughout life. . . . .

. . . . If we compare the facts of social taboo generally or of its subdivision, sexual taboo, we find that the ultimate test of human relations, in both *genus* and *species*, is *contact*. . . . . Throughout the world, the greeting of a friend is expressed by contact, whether it be nose-rubbing, or the kiss, the embrace, or the clasp of hands; so the ordinary expression of friendship by a boy, that eternal savage, is contact of arm and shoulder. More interesting still, for our purpose, is the universal expression by contact, of the emotion of love. . . . .

On the other hand, the avoidance of contact, whether consciously or subconsciously presented, is no less the universal characteristic of human relations, where similarity, harmony, friendship, or love is absent. This appears in the attitude of men to the

sick, to strangers, distant acquaintances, enemies, and in cases of difference of age, position, sympathies or aims, and even of sex. Popular language is full of phrases which illustrate this feeling.

Again, the pathology of the emotions supplies many curious cases, where the whole being seems concentrated upon the sense of touch, with abnormal desire or disgust for contact; and in the evolution of the emotions from physiological pleasure and pain, contact plays an important part in connection with functional satisfaction or dissatisfaction with the environment.

In the next place there are the facts, first, that an element of thought inheres in all sensation, while sensation conditions thought; and secondly, that there is a close connection of all the senses, both in origin, each of them being a modification of the one primary sense of touch, and in subsequent development, where the specialised organs are still co-ordinated through tactile sensation, in the sensitive surface of organism. Again, and here we can see the genesis of ideas of contact, it is by means of the tactile sensibility of the skin and membranes of sense-organs, forming a sensitised as well as a protecting surface, that the nervous system conveys to the brain information about the external world, and this information is in its original aspect the response to impact. Primitive physics, no less than modern, recognises that contact is a modified form of a blow. These considerations show that contact not only plays an important part in the life of the soul, but must have had a profound influence on the development of ideas, and it may now be assumed that ideas of contact have been a universal and original constant factor in human relations, and that they are so still. The latter assumption is to be stressed, because we find that the ideas which lie beneath primitive taboo are still a vital part of human nature, though mostly emptied of their religious content; and also because, as I hold, ceremonies and etiquette such as still obtain, could not possess such vitality as they do, unless there were a living psychological force behind them, such as we find in elementary ideas which come straight from functional processes. . . . .—E. Crawley, *The Mystic Rose*, 33–58; 76–78 (Macmillan, 1902).

Westermarck's volume on marriage is among the works which should be read entire. I have made several selections from this work, but they may be taken as indicating its importance without adequately representing it.

For some years following the appearance of Westermarck's views it was rather generally admitted by students of early marriage that he had finally disposed of the older theory of Lubbock that the original form of marriage was communistic. Lubbock held that exogamy, or the practice of marrying outside the clan, originated in the fact that no man had any particular claim on any woman in his group, she being a common possession, and that in order to get a particular wife a man was obliged to capture her outside the clan. But more recently Spencer and Gillen have found in central Australia something which looks very much like what Lubbock assumed, and their argument for an early state of promiscuity is quoted in part above.

This whole question is still very obscure. Westermarck's view that "marriage was transmitted to man from some ape-like ancestor and there never was a time when it did not occur in the human race," and that "there is not a shred of evidence that promiscuity ever formed a *general* stage in the social history of mankind," is probably substantially sound. Man is fundamentally a jealous animal. The strange lack of sexual jealousy among the Australians and Todas is not a natural trait but a socially induced condition, similar in

its psychology to the food inhibitions of the Australians and the buffalo ceremonial of the Todas, so minutely described by Rivers. We may, therefore, agree with Westermarck that man had already a monogamous, or at least a polygynous, tendency when emerging from the instinctive and brute condition. But as he came into possession of a characteristic human mind, with reflection and imagination, as modesty, clothing, and social inhibitions were developed, he began to make the sexual interest a play interest, and this the animals have never done. They have a pairing season, and man has not. And as the regulation of sexual life became less instinctive and more reflective and social very contradictory practices arose; and by the operation of the law of habit, these became very rigid in particular groups. Among these conditions is the one of approximate communism in marriage described by Spencer and Gillen, but I think they are wrong in regarding this as vestigial —a remnant of an antecedent condition of promiscuity. The best comment, indeed, which can be made on their position is the passage on food regulations among the Australians, printed in Part II above. These food practices represent a highly and particularly elaborated code, worked out in a particular environment, in connection with the particular experiences and acts of attention of a particular people. They do indicate that communistic rather than individualistic food practices are more favorable to life in an early stage of society, but they are to be regarded as peculiar adaptations, not as vestiges.

The passage from Rivers on the Todas is also significant in this connection. If Rivers had been inclined to do so he could have made out a very good case for

polyandry as the original and once universal form of marriage. Woman is more stationary than man, more confined to one spot by the child, and less actively interested than man in marriage. It is also well known that in early times she refused to follow the man to his home, and he was obliged to settle in hers. In ancient Arabia and elsewhere the woman sometimes remained at home and entertained a succession of husbands; and the women of the Jahiliya Arabs had the habit of dismissing their husbands by turning the tent around, "so that if it had faced east it now faced west, and when the man saw this he knew that he was dismissed, and did not enter." But to argue from this and similar evidence that polyandry was at one time universal and that its present forms are vestigial, would be quite wrong. The group-marriage of the Arunta and the even stranger polyandry of the Todas are particular expressions of the "mores," not signs of universal stages. In this respect they resemble our "table manners."

With regard to the singular practice on which Spencer and Gillen have put so much stress—the accessibility at certain times of women to men whom they are not permitted by the tribal rules to marry, I have elsewhere expressed a view ("Der Ursprung der Exogamie," *Zeits. für Socialwissenschaft,* 5:1–18) that this is connected with a transition to exogamy, and with the interest of man in the unfamiliar. An abridged translation of this paper, entitled "The Psychology of Exogamy," is indicated in the bibliography below.

Since I have drawn particular attention to the merit of Westermarck's work I may add that the reader will find his great defect in his method of regarding certain

practices as vestiges of assumed antecedent conditions of whose existence these so-called vestiges are the guarantee. This is, in fact, the same defect as that to which I have alluded in the argument of Spencer and Gillen. To note only a single instance, Westermarck has collected many pages of what he calls survivals from a period of marriage by capture. But there is good reason to think that marriage by capture was never a general practice. See the remarks on this point by Spencer and Gillen above. And the alleged survivals of capture in historical times, of which Westermarck makes so much, are probably to be regarded merely as systematized expressions of the coyness of the female, differing in no essential respect from the coyness of the female bird at the pairing season. It became "good form" and a trait of modesty in a girl not to yield without a show of avoidance, and under these conditions ceremonial avoidance became elaborate. But it does not lead us back to a condition of actual capture. The theory of Koenigswarter and Spencer, adopted by Westermarck, that marriage by purchase was developed from marriage by capture (the purchase price being originally a fine paid by the captor to the outraged father) is far-fetched. If the lowest savages have not the idea of regular barter, they have, as shown in Part I by Bücher and by Westermarck here, the idea of giving and receiving presents. Now one of the earliest means of securing a wife was by exchange. Curr (*The Australian Race,* 1:107) says: "The Australian male almost invariably obtains his wife or wives either as the survivor of a married brother, or in exchange for his sisters, or later in life for his daughters." Gifts in general develop into barter, and exchange of women de-

velops into purchase, without any assumption of capture. But I do not even think that exchange of wives *always* preceded purchase. Food and service were other original means of compensation.

In Crawley's *Mystic Rose* and also in Van Gennep's *Rites de passage* (listed in the bibliography of Part VI) there is also evidence that this natural tendency to avoidance was complicated by the idea that ill-luck connected with crises, especially with contact of the sexes, could be transferred or avoided by magical practice, and rites originating in this connection resemble capture.

The selection from Crawley printed here elaborates one of the fundamental causes of the present great disparity in the interests of men and women. His whole book is instructive, but he is possessed with the idea that magic is at the root of many if not the most of marriage practices, and he often slips in the magical, secondary, and particularistic explanation where it does not belong.

In the passage from Spencer there are several fanciful inferences. There is no reason to conclude that the fertility of women is more closely connected with monogamy than with polygyny. That primitive women received such brutal treatment from men as to interfere with child-bearing is more than doubtful. Primitive women were not greatly abused, and they were more prolific than the more artificially protected woman of the present. The statement also that "the monogamic relation in a high degree favors preservation of life after the reproductive period is passed," has nothing in its favor. Nowhere in the white world are aged parents in general treated with so great consideration as in China, and China is not distinguished for its monogamy.

1 Angus, H. C. "The 'Chensamwali,' or Initiation Ceremony of Girls, as Performed in Azimba Land," *Zeits. f. Ethn.*, 30:479–82.

2 Beauchamp, W. M. "Iroquois Women," *Jour. Am. Folk-Lore*, 13: 81–91.

3 Bei, Mustafa. "Die mohammedanische Frau," *Globus*, 66:140–43.

4 Bosanquet, H. *The Family.* New York, 1906.

5 Campbell, H. *Differences in the Nervous Organization of Man and Woman.* London, 1891.

6 Chamberlain, A. F. "Primitive Woman as Poet," *Jour. Am. Folk-Lore*, 16:205–21.

*7 Crawley, A. E. *The Mystic Rose: A Study of Primitive Marriage.* London, 1902.

*8 Crawley, A. E. "Sexual Taboo: A Study in the Relations of the Sexes," *Jour. Anth. Inst.*, 24:116–25; 219–35; 430–46.

9 Danks, B. "Marriage Customs of the North Britain Group," *Jour. Anth. Inst.*, 18:281–94.

*9a Dargun, L. *Mutterrecht und Vaterrecht.* Leipzig, 1892.

*10 Dorsey, J. O. "Omaha Sociology," *Bur. Amer. Ethn., Ann. Rep.*, 3:252–75. [Marriage and domestic life.]

11 Durkheim, E. "La prohibition de l'inceste et ses origines," *L'Année sociologique*, 1:1–70.

12 Dyer, T. F. *Folk-Lore of Women.* London, 1905.

*13 Ellis, H. H. *Man and Woman: A Study of Human Secondary Characters.* London, 1904.

14 Enjoy, P. d'. "La femme," *Soc. d'anth. de Paris, Bul.*, 4 sér., 8:59–63.

14a Frazier, J. G. *Totemism and Exogamy.* New York. [Announced.]

*15 Galton, F. "Eugenics: Its Definition, Scope, and Aims," *Am. Jour. Sociol.*, 10:1–25.

*16 Galton, F. "Studies in Eugenics," *Am. Jour. Sociol.*, 11:11–25.
[The papers of the Laboratory of Eugenics, founded by Galton, are published by Dulau & Co., 37 Soho Sq., London.]

17. Garnett, L. M. J. *The Women of Turkey.* London, 1893. 2 v. in 1.

*18 Geddes, P., and Thompson, J. A. *The Evolution of Sex.* London, 1889.

19 Gennep, A. Van. *Les rites de passage.* Paris, 1909.
[Pp. 57–92, on the ritualism of child-birth, puberty, etc.]

20 Grinnell, G. B. "Cheyenne Woman Customs," *Am. Anth.*, N. S., 4:13–16.

21 Grinnell, G. B. "Marriage among the Pawnees," *Am. Anth.*, 4: 275–81.

22 Haddon, A. C. "Courtship and Marriage," *Cambridge Anth. Expedition to Torres Straits, Reports,* 5:222–32; 6:112–19.

23 Hamilton, A. G. "Customs of the New Caledonian Women," *Jour. Anth. Inst.*, 7:206, 207.

24 Hartmann, M. "Die Frau in Islam," *Zeits. des Vereins f. Volkskunde,* 11:237–52.

*25 Hobhouse, L. T. *Morals in Evolution,* "Marriage and the Position of Women," 1:134–77; "Women in the Civilized World," 1:178–239.

*26 Howard, G. E. *A History of Matrimonial Institutions, Chiefly in England and the United States, with an Introductory Analysis of the Literature and Theories of Primitive Marriage and the Family.* Chicago, 1904. 3 v.
[A monumental work of unique value for historical and modern times.]

27 Howitt, A. W. *The Native Tribes of South-East Australia,* "Marriage Rules," 173–294.

28 Iguchi. "Wenig bekannte japanische Hochzeitbräuche," *Globus,* 68: 270–72.

29 Jacobowski, L. "Das Weib in der Poesie der Hottentotten," *Globus,* 70:173–76.

30 Klugmann, N. *Die Frau im Talmud.* Wien, 1898.

30*a* Kohler, J. *Zur Urgeschichte der Ehe, Totemismus, Gruppenehe, Mutterrecht.* Stuttgart, 1897.

31 Kovalevsky, M. "La famille matriarcale au Caucase," *L'Anth.*, 4:259–78.

32 Kovalevsky, M. *Tableau des origines et de l'évolution de la famille et de la propriété.* Stockholm, 1890.

33 Küchler, L. W. "Marriage in Japan," *Trans. Asiatic Soc. of Japan,* 13:114–38.

33*a* Lasch, R. "Der Selbstmord aus erotischen Motiven bei den primitiven Völkern," *Zeits. für Socialwissenschaft,* 2:578–85.

34 Lejeune, M. C. "La representation sexuelle en art et pédagogie," *Soc. d'anth., Bul.*, 5 séries, 2:465–81.

35 Letourneau, C. *The Evolution of Marriage and of the Family.* (Translation.) New York, 1891.

36 Letourneau, C. "La femme à travers les âges," *Rev. mensuelle de l'école d'anth.*, 10:273–90.

37 McLennan, J. F. *Studies in Ancient History.* London, 1896.

38 Manouvrier, L. "Conclusions générales sur l'anthropologie des sexes et applications sociales," *Rev. mensuelle de l'école d'anth.*, 13:405–23; 16:249–60.

39 Marion, H. *Psychologie de la femme.* Paris, 1900.

*39a Mason, O. T. *Woman's Share in Primitive Culture.* New York, 1905.

40 Matthews, R. H. Marriage and Descent in the Arranda Tribe, Central Australia," *Am. Anth.*, N. S., 10:88–102.

41 Mayer, A. "Zur Frauenfrage," *Zeits. f. Socialwissenschaft*, 12:1–19.

42 Montgomery, Th. H. "The Morphological Superiority of the Female Sex," *Amer. Philos. Soc., Proc.*, 43:365–80.

*43 Morgan, L. H. *Ancient Society*, "Growth of the Idea of Family," 383–449.

44 Nieboer, H. J. "Der 'Malthusianismus' der Naturvölker," *Zeits. f. Socialwissenschaft*, 6:715–18.

45 Parsons, E. C. *The Family.* New York, 1906.

46 Peal, S. E. "On the 'Morong' as Possibly a Relic of Pre-Marriage Communism," *Jour. Anth. Inst.*, 22:244–61.

*47 Ploss, H. *Das Weib in der Natur- und Völkerkunde.* Leipzig, 1902. 2 v.

[The greatest collection of ethnological materials apart from theory.]

47a Pommmerol, J. *Among the Women of the Sahara.* (Translation.) London, 1900.

48 Post, A. H. "Ueber die Sitte, nach welcher Verlobte und Ehegatten ihre gegenseitigen Verwandten meiden," *Globus*, 67:174–77.

49 Ramabai, Pundita. *The High-Caste Hindu Woman.* Philadelphia. 1888.

*50 Ratzel, F. *History of Mankind*, "Family and Social Customs," 1: 114–28.

51 Rhamm, K. "Der Verkehr der Geschlechter unter den Slaven in seinen gegensätzlichen Erscheinungen," *Globus*, 82:103–8; 186–93; 271–79; 320–25.

*52 Rivers, W. H. R. "The Regulation of Marriage," "Kinship," *Cam-*

bridge Anth. Expedition to Torres Straits, Rep., 5:129–42; 233–47; 6: 92–101; 120–25.

*53 RIVERS, W. H. R. *The Todas*, "Marriage," 502–39.

54 ROTH, H. L. "On the Signification of Couvade," *Jour. Anth. Inst.*, 22:204–41.

55 SABATIER, C. "Etude sur la femme Kabyle," *Rev. d'anth.*, 12:56–69.

56 SCHLEGEL, G. *La femme chinoise.* Leiden, 1896.

57 SCHMIDT, R. *Liebe und Ehe im alten und modernen Indien.* Berlin, 1904.

58 SCHREIBER, M. *Buddha und die Frauen.* Leipzig, 1903.

59 SCHWEIGER-LERCHENFELD, A. VON. *Die Frauen des Orients in der Geschichte, in der Dichtung und im Leben.* Wien, 1903.

*60 SELIGMAN, C. G. "Birth and Childhood Customs," "Women and Puberty Customs," *Cambridge Anth. Expedition to Torres Straits, Rep.*, 5:194–207.

61 SIMMEL, G. "Zur Psychologie der Frauen," *Zeits. f. Völkerpsychologie und Sprachwissenschaft*, 20:6–46.

*62 SKEAT AND BLAGDEN. *Pagan Races of the Malay Peninsula*, "Birth-Customs and Beliefs," 2:1–27; "Marriage Customs and Beliefs," 2:55–88.

*63 SPENCER, B., AND GILLEN, F. J. *The Native Tribes of Central Australia*, "Certain Ceremonies Concerned with Marriage," 92–111; "Methods of Obtaining Wives," 554–60.

*64 SPENCER, B., AND GILLEN, F. J. *The Northern Tribes of Central Australia*, "Marriage Ceremonies and Other Customs," 133–42.

65 SPENCER, H. *The Principles of Sociology*, "Domestic Institutions," 1:603–76.

66 STARCKE, C. N. *The Primitive Family in Its Origin and Development.* New York, 1889.

67 STEVENS, H. V. "Mittheilungen aus dem Frauenleben der Orang Bělendas, ... ," *Zeits. f. Ethn.*, 28:163–202.

*68 STEINMETZ, S. R. "Die neuern Forschungen zur Geschichte der menschlichen Familie," *Zeits. f. Socialwissenschaft*, 2:685–95; 809–26.

*69 STOLL, O. *Das Geschlechtsleben in der Völkerpsychologie.* Leipzig, 1908.

70 TAKAISHI, SH. *Japans Frauen und Frauenmoral.* Rostock, 1905.

71 TANNER, A. "The Community of Ideas of Men and Women," *Psych. Rev.*, 3:548–50.

72 THOMAS, N. W. *Kinship Organisations and Group Marriage in Australia.* Cambridge, 1906.

73 THOMAS, W. I. *Sex and Society.* Chicago, 1907.
[Contains paper on exogamy.]

75 TUFTS, J. H. "On the Psychology of the Family," *Psych. Bul.*, 4: 371–74.

76 TYLOR, E. B. "The Matriarchal Family System," *Nineteenth Century*, 40:81–96.

77 VEBLEN, T. "The Barbarian Status of Women," *Am. Jour. Sociol.*, 4: 503–14.

78 VOTH, H. R. "Oraibi Marriage Customs," *Am. Anth.*, N. S., 2: 238–46.

79 WALHOUSE, M. J. "A Hindu Prophetess," *Jour. Anth. Inst.*, 14: 187–92.

*79a WESTERMARCK, E. *The History of Human Marriage.* London, 1891.

*80 WESTERMARCK, E. "Die Pflichten des Mannes gegen Frau und Kinder bei den Naturvölkern," *Zeits. f. Socialwissenschaft*, 9:555–60.

*81 WESTERMARCK, E. *The Origin and Development of the Moral Ideas*, "The Subjection of Wives," 1:629–69.

82 WILSER, L. "Die Frauenfrage im Lichte der Anthropologie," *Globus*, 72:331–36.

83 WILUTSKY, P. *Mann und Weib.* Breslau, 1903.

PART V

ART, ORNAMENT, AND DECORATION

ART, ORNAMENT, AND DECORATION

[POINT OF VIEW FOR STUDY OF PRIMITIVE ART]

. . . . When difficult problems have to be investigated the most satisfactory method of procedure is to reduce them to their simplest elements, and to deal with the latter before studying their more complex aspects. The physiology of the highest animals is being elucidated largely by investigations upon the physiology of lower forms, and that of the latter in their turn by a knowledge of the activities of the lowest organisms. It is among these that the phenomena of life are displayed in their least complex manifestations; and they, so to speak, give the key to a right apprehension of the others.

So, too, in studying the arts of design. The artistic expression of a highly civilised community is a very complex matter, and its complete unravelment would be an exceedingly difficult and perhaps impossible task. In order to gain some insight into the principles which underlie the evolution of decorative art, it is necessary to confine one's attention to less specialised conditions; the less the complication, the greater the facility for a comprehensive survey. In order, therefore, to understand civilised art we must study barbaric art, and to elucidate this savage art must be investigated. Of course it must be understood that no hard and fast line can be drawn between any two of these stages of culture; I employ them merely as convenient general terms. These are the reasons why I shall confine myself very largely to the decorative art of savage peoples.

There are two methods of studying the art of savages; the one is to take a comparative view of the art of diverse backward peoples; the other is to limit the attention to a particular district or people. The former is extremely suggestive; but one is very liable at times to be led astray by resemblances, as I shall have frequent occasion to point out in the following pages. The latter is in some respects much more certain in its conclusions, and is the only way by which certain problems can

be solved. In the first part of this book I shall adopt the latter plan in order to indicate its particular value, and to afford data for subsequent discussion. In the remaining parts of the book I shall draw my illustrations from the most convenient sources, irrespective of race or locality.

In my first section the decorative art of a particular region has been studied much in the same way as a zoologist would study a group of its fauna, say the birds or butterflies. Naturally, the methods of the purely systematic zoologist neither can nor should be entirely followed, for the aim in life of the analytical zoologist is to record the fauna of a district and to classify the specimens in an orderly manner. To the more synthetically-minded zoologist the problems of the geographical distribution of animals have a peculiar fascination, and he takes pleasure in mapping out the geographical variations of a particular species and in endeavouring to account for the diversity of form and colour which obtains, as well as to ascertain the place of its evolution and the migrations which have subsequently taken place. The philosophical student also studies the development of animals and so learns something of the way in which they have come to be what they are, and at the same time light is shed upon genealogies and relationships.

The beautifying of any object is due to impulses which are common to all men, and have existed as far back as the period when men inhabited caves and hunted the reindeer and mammoth in Western Europe. The craving for decorative art having been common to mankind for many thousand years, it would be a very difficult task to determine its actual origin. All we can do is to study the art of the most backward peoples, in the hope of gaining sufficient light to cast a glimmer down the gloomy perspective of the past.

There are certain needs of man which appear to have constrained him to artistic effort; these may be conveniently grouped under the four terms of Art, Information, Wealth, and Religion.

Art.—Æsthetics is the study or practice of art for art's sake, for the sensuous pleasure of form, line, and colour.

Information.—It is not easy to find a term which will express all that should be dealt with in this section. In order to convey

information from one man to another, when oral or gesture language is impossible, recourse must be had to pictorial signs of one form or another. It is the history of some of these that will be dealt with under this term.

Wealth.—It is difficult to distinguish among savages between the love of wealth or power. In more organised societies, power, irrespective of wealth, may dominate men's minds; and it is probable that, whereas money is at first sought after in order to feel the power which wealth can command, later it often degenerates into the miser's greed for gain.

The desire for personal property, and later for enhancing its value, has led to the production of personal ornaments apart from the purely æsthetic tendency in the same direction. There are also emblems of wealth, and besides these, others of power or authority. The practice of barter has led to the fixation of a unit of value, and this in time became represented by symbols—*i. e.*, money.

Religion.—The need of man to put himself into sympathetic relation with unseen powers has always expressed itself in visual form, and it has gathered unto it the foregoing secular triad.

Representation and symbolism convey information or suggest ideas.

Æsthetics brings her trained eye and skilled hand.

Fear, custom, or devotion have caused individual or secular wealth to be directed into other channels, and have thereby entirely altered its character. The spiritual and temporal power and authority of religion has also had immense and direct influence on art.

In a very large number of cases what I have termed the four needs of man act and react upon one another, so that it is often difficult or impossible to distinguish between them, nor do I profess to do so in every case. It is sufficient for our present purpose to acknowledge their existence and to see how they may affect the form, decoration, or representation of objects.

Having stated the objects for which these representations are made, we must pass to a few other general considerations.

It is probable that *suggestion* in some cases first turned the human mind towards representation. A chance form or contour

suggested a resemblance to something else. From what we know of the working of the mind of savages, a mere resemblance is sufficient to indicate an actual affinity. These chance resemblances have occupied a very important place in what has been termed sympathetic magic, and natural objects which suggest other objects are frequently slightly carved, engraved, or painted in order to increase the fancied resemblance. A large number of examples of this can be culled from the writings of missionaries and others, or seen in large ethnographical collections. Mr. H. Balfour has also given one or two interesting illustrations of this process. For example, a stone which suggests a human face is noted by a native and the features are slightly emphasised, and ultimately the object may become a fetich or a charm. The mandrake (*Mandragora*) is very important in sympathetic magic, and its human attributes have been suggested by the two roots which diverge from a common underground portion, and which recall the body and legs of a man; a slight amount of carving will considerably assist nature and a vegetable man results.

Suggestion does not operate only at the inception of a representation or design, but it acts continuously, and may at various times cause strange modifications to occur.

Expectancy, as Dr. Colley March has pointed out, has been a very important factor in the history of art. This is intimately connected with the association of ideas. If a particular form or marking was natural to a manufactured object, the same form and analogous marking would be given to a similar object made in a different manner, and which was not conditioned by the limitations of the former. For beautiful and convincing illustrations of the operation of this mental attitude of expectancy the reader is referred to the section on skeuomorphic pottery (p. 997).

We may regard suggestion and expectancy as the dynamic and static forces operating on the arts of design; the former initiates and modifies, the latter tends to conserve what already exists.

It is the play between these two operations which gives rise to what may be termed a distinctive *"life-history"* of artistic representations.

A life-history consists of three periods: birth, growth, death.

The middle period is one which is usually marked by modifications which may conveniently be grouped under the term of evolution, as they imply a gradual change or metamorphosis, or even a series of metamorphoses.

For our present purpose we may recognise three stages of artistic development—origin, evolution, and decay.

The vast bulk of artistic expression owes its birth to realism; the representations were meant to be life-like, or to suggest real objects; that they may not have been so was owing to the apathy or incapacity of the artist or to the unsuitability of his materials.

Once born, the design was acted upon by constraining and restraining forces which gave it, so to speak, an individuality of its own. In the great majority of representations the life-history ran its course through various stages until it settled down to uneventful senility; in some cases the representation ceased to be—in fact it died. . . . .

It will be found that the decorative art of primitive folk is directly conditioned by the environment of the artists: and in order to understand the designs of a district, the physical conditions, climate, flora, fauna, and anthropology, all have to be taken into account; thus furnishing another example of the fact that it is impossible to study any one subject comprehensively without touching many other branches of knowledge.

All human handiwork is subject to the same operation of external forces, but the material on which these forces act is also infinitely varied. The diverse races and people of mankind have different ideas and ideals, unequal skill, varied material to work upon, and dissimilar tools to work with. Everywhere the environment is different. So we get that bewildering confusion of ideas which crowd upon us when inspecting a large ethnographical collection or a museum of the decorative arts.

The conclusion that forced itself upon me is that the decorative art of a people does, to a certain extent, reflect their character. A poor, miserable people have poor and miserable art. Even among savages leisure from the cares of life is essential for the culture of art. It is too often supposed that all savages are lazy, and have an abundance of spare time, but this is by no means always the case. Savages do all that is necessary for life; any-

thing extra is for excitement, æsthetics, or religion; and even if there is abundance of time for these latter, it does not follow that there is an equivalent superfluity of energy. The white man, who has trained faculties and overflows with energy, is apt to brand as lazy those who are not so endowed. In the case of British New Guinea it appears pretty evident that art flourishes where food is abundant. One is perhaps justified in making the general statement that the finer the man the better the art, and that the artistic skill of a people is dependent upon the favourableness of their environment.

The relation of art to ethnology is an important problem. So far as our information goes, it appears that the same processes operate on the art of decoration whatever the subject, wherever the country, whenever the age—another illustration of the essential solidarity of mankind. But there are, at the same time, numerous and often striking idiosyncrasies which have to be explained. Many will be found to be due to what may be termed the accidents of locality. Natural forms can only be intelligently represented where they occur, and the materials at the disposal of the artist condition his art. . . . .

I have elsewhere thrown out the following suggestion:—"It will often be found that the more pure or the more homogeneous a people are, the more uniformity will be found in their art work, and that florescence of decorative art is a frequent result of race mixture." For although prolific art work may be dependent, to some extent, upon leisure due to an abundance of food, this will not account for artistic aptitude, though in process of time the latter may be a result of the employment of the leisure; still less will it account for the artistic motives or for the technique.

The art of a people must also be judged by what they need not do and yet accomplish. The resources at their command, and the limitations of their materials, are very important factors; but we must not, at the same time, ignore what they would do if they could, nor should we project our own sentiment too much into their work. In this, as in all other branches of ethnographical inquiry, we should endeavour to learn all we can about them from their own point of view before it is too late. At the

present stage knowledge will not be advanced much by looking at laggard peoples through the spectacles of old-world civilisation. —A. C. Haddon, *Evolution in Art: Introduction*, 2–10 (Walter Scott, 1895).

CLOTHING AND ORNAMENT

We have heard tell of races to whom clothing is unknown; but it must be said that the few cases of this for which there is good evidence are exceptions that have arisen under such special conditions as only to establish the rule. If, however we are to discover the principles which underlie the usage generally, the first thing required is to come to an understanding as to what we mean by clothing. It is surely impossible to designate mere ornament as clothing; among tribes in tropical countries the motive of protection against cold entirely disappears, and of all the superfluity of our northern apparel, nothing remains save what is required by decency. One need hardly discuss the question whether there is any thought of simply *protecting* the parts concealed. If it were a question of protection, the feet and ankles would surely be sooner covered. What is most decisive is the observed fact that clothing stands in unmistakable relation to the sexual life, and that the first to wear complete clothes is not the man who has to dash through the bush in hunting, but the married woman. This gives us the primary cause of wrappings, which must have arisen when the family was evolved from the unregulated intercourse of the horde,—when the man began to assert a claim to individual and definite women. He it was who compelled the woman to have no dealings with other men, and to cover herself as a means of diminishing her attractions. As a further step in this direction may be noted the veiling of the bosom. From this root, the separation of the sexes, sprang the feeling of modesty; this developed powerfully, and clothing with it. It was a great stride; since the more confined and more destitute the life of a tribe is, the less inducement is given to a rigid separation of the sexes with its attendant jealousy; and the more readily do they dispense with the troublesome covering, of which scanty fragments alone remain. Thus it is always the smallest, most degraded, most out-of-the-way tribes among

whom we more especially find no mention of customary clothing; such as some Australian races, the extinct Tasmanians, some forest tribes of Brazil, and here or there a negro horde. Even with them survivals of dress are not wanting. When clothing was more complete, the woman gained immensely in charm, esteem, and social position, so that she had every reason to keep up her wardrobe.

It is quite otherwise with the portion of the dress intended directly to protect the body. In all places we find the shoulder-covering in the shape of a cloak. Tropical tribes use it primarily to keep off the rain, while in colder climates it serves for warmth and also as a sleeping-cover. These cloak-like articles of clothing are far less widely diffused than those which serve for decency; which also proves that the latter were the first clothing worn by men.

Another circumstance undoubtedly has contributed to develop the sense of modesty, as Karl von den Steinen has pointed out. As the wild beast drags his prey into the thicket, in order to devour it undisturbed, so some tribes think it highly indecorous to look at any one eating; and the same may have held good in regard to other functions. Still this can only have been subsidiary, and does not account for the original concealment. Finally we must not overlook the superstitious dread of the possible effects of the evil eye, though here again this cannot be rightly assigned as the root-idea of modesty. Curiously enough, in New Guinea no more than in ancient Greece do the representations of ancestors, with their free exhibition of what in the living is carefully concealed, seem to give any offence. But all these various causes tend to react upon and supplement each other mutually. Further, no relation can be traced between the amount of clothing worn and the degree of culture attained. The lady of Uganda or Unyoro who drapes herself with elaborate care in her robes of bark, stands in general no higher than the Nyam-Nyam negress, whose sole garment is a leaf. Nor do the former race, who treat it as a capital offence to strip in public, hold any higher position than the Duallas, who take off every rag for their work in the sea. Nor, lastly, do we find any marked national distinctions in these matters. All things consid-

ered, we may say that in mankind of to-day modesty is universal; and where it seems to be lacking, this is due to some accidental or transitory conditions.

But this is not the only feeling which the simple man is endeavouring to satisfy when he clothes his body. Next to it stands the gratification of vanity. The former motive, as a mere injunction of custom, is quickly done with; the other is sought to be attained at any cost. One may say without exaggeration that many races spend the greater part of their thought and their labour on the adornment of their persons. These are in their own sphere greater fops than can be found in the highest civilization. The traders who deal with these simple folk know how quickly the fashion changes among them, as soon as a plentiful importation of varied stuffs and articles of ornament takes place. The natural man will undergo any trouble, any discomfort, in order to beautify himself to the best of his power.

Thus it would obviously be unjust to form any judgment as to the absence or deficiency of clothing without regard to the other attentions which the "natural" races pay to the body. If we look at all together we get an impression of predominant frivolity. Necessaries have to give way to luxuries. The poorest Bushman makes himself an arm-ring out of a strip of hide, and never forgets to wear it, though it may well happen that his leather apron is in a scandalously tattered state. The man of low culture demands much more luxury compared with his small means than one in a higher state. Ornament holds such a foremost place that some ethnologists have declared it impossible to decide where clothing ends and ornament begins. All clothing seems to them to have proceeded by way of modification from ornament; and they hold that modesty played no part in the earliest evolution of dress. The facts no doubt show that the delight in ornament preponderates over the sense of decency; but it does not follow that is was anterior.

Modesty in the woman is especially apt to take on a touch of coquetry, for an example of which we need look no further than the low-necked dresses of our own ball-rooms. In this way what was once an article essential to decency imperceptibly approximates more and more to ornament by the addition of

fringes, or, as among the Fans and some of the Congo tribes, by the attachment of strings of jingling bells. Even more grotesque combinations of concealment and parade may be observed; especially where there is a religious motive for the former.

The style and completeness of the clothing naturally depends in great measure upon the extent to which Nature or labour has provided material. All countries are not so benevolently furnished in this respect as tropical Brazil, where the "shirt-tree," a kind of *Lecythis*, grows with its pliant and easily-stripped bark. The Indians cut up the stem into lengths of 4 or 5 feet, strip the bark off, soak and beat it soft, cut two armholes, and the shirt is ready. In the same forests grows a palm, the spathe of which provides a convenient cap without further preparation. The fig-leaf of Paradise recurs in a thousand variations, and celebrates its revival by appearing in manifold forms, even to the universal rush-cloak.

The use of bark as a clothing material is, or was, widely spread from Polynesia to the west coast of Africa. It recurs in America, and thus is found in all lands within the tropics; and besides this, the bast or inner bark of the lime was used for a similar purpose in the old days by Germanic tribes. The laws of Manu prescribe to the Brahman who purposes to end his days in religious meditation amid the primeval forests, that he shall wear a garment of bark or skin. Here probably, as in Africa, the bark of a species of *Ficus* was used for the purpose. But in Polynesia the manufacture of a material called *tapa* from the bark of the paper-mulberry was carried to great perfection. Races who no longer make use of this material procure it for special occasions. Thus the more settled Kayans of Borneo, when they go into mourning, throw off their cotton *sarongs* to wrap themselves in bark-cloth; and on the west coast of Africa, at certain festivities connected with fetish-worship, it is usual to wear skins instead of clothes. In this there lies a perfectly right sentiment, that their home-invented garments, borrowed directly from Nature, have a higher intrinsic value than the rubbishy European fripperies, the invasion of which has made clothing arbitrary and undignified.

How little the great schoolmistress Want can impress upon

the "natural" races that seriousness which behaves appropriately at the bidding of hardship, is shown by comparing the dwellers in a severe climate with those who live under more genial skies. The South Australians and Tasmanians hardly wore more clothes than the Papuas. Considering the abundance of animals, we can only refer the scantiness of their attire to laziness. The Fuegians who are best situated, those of the east coast, wear guanaco cloaks like the Patagonians, and those of the west coast, have at least seal-skins; but among the tribes near Wollaston Island a piece of otter-skin, hardly as large as a pocket-handkerchief, often affords the only protection against the rude climate. Fastened across the breast with strings, it is pushed to one side or another, according as the wind blows. But many, says Darwin, go without even this minimum of protection. Only the Arctic races, always inventive and sensible, have in this, as in other matters, better adapted themselves to the demands of their surroundings and their climate; and their clothing of furs and bird-skins is in any case among the most rational and practical inventions in this class. They are, however, the only "natural" races of the temperate or frigid zones whose clothing is completely adapted to its purpose. The outliers of them in the North Pacific, such as the inhabitants of King William's Sound and others, may be recognised at once beside their Indian neighbours by their clothing. The Eskimo dress, which covers the whole body, obviously limits the use of ornament. Hence we never find arm or leg-rings, and only rarely necklaces of animal's teeth or European beads; but, on the other hand, buttons, like sleevebuttons, of stone or bone, not uncommonly decorate lips and ears. The fact that they tattoo the body, however, indicates a former residence in a warmer climate.

Footgear is universally worn on the march; it is generally made of hide, less often of wood or bark. Curiously enough the method of fastening sandals is essentially the same all the world over.

Among "natural" races no one goes without ornament; the contrary to what we find among civilized people, many of whom, rich and poor alike, avoid any ornamentation, either of their person or of their clothing. But the universal distribution of

ornament seems easier when we consider its by-aims. In the first place the amulets, which are hardly ever missing, assume the shape of decorations. Hildebrandt, in his admirable work on the Wakamba, says: "Amulets are regarded as defensive weapons, and so, in a treatise on ethnography, deserve a place between weapons and ornaments." But they have more affinity with the latter than with the former. The fan is used not only to flirt, nor only even for purposes of coolness, but is an indispensable implement in kindling and maintaining the charcoal fire. The massive iron arm-rings, with which the negro bedecks himself, are adapted for both parrying and striking. The Irengas of the Upper Nile wear these sharpened to a knife-like edge. In peace they are covered with a leather sheath, in battle they serve as fighting-rings. Of a similar kind are the arm-rings of the neighbouring Jurs, fitted with a pair of spikes. The smart dagger attached to the upper arm or hung from the neck is half weapon, half ornament. But we must reckon among genuinely decorative weapons the beautifully-carved clubs of the Melanesians and negroes, the batons of command, the decorated paddles. The savage warrior can no more do without ornament than without his weapon. Are we to suppose that this connection has so deep a psychological basis in the stimulus to self-esteem and courage given by external splendour, that it has reached even to the heights of our own military civilization?

Ornament and distinction again go hand in hand, though for this brilliancy and costliness are not always necessary. In East and Central Africa the chiefs wear arm and leg-rings made from the hair of the giraffe's tail; in West Africa, caps from the hide of a particular antelope; while in Tonga, necklaces of the cachalot or sperm-whale's teeth serve at once for ornament, distinction, and money—perhaps also for amulets. It is quite intelligible that in the lower grades of civilization, where even great capitalists can carry their property on their persons, ornament and currency should be interchangeable. There is no safer place—none where the distinction conferred by wealth can be more effectively displayed—than the owner's person. Hence the frequency with which we find forms of currency which may at the same time serve for ornament, cowries, *dentalium,* and other

shells, cachalots' teeth, iron and copper rings, coins with a hole through them. Silver and gold currencies have grown up in the same way; but among the barbarous races of the older world, only the Americans seem to have appreciated the value of gold. It was left for Europeans to discover the great stores of this metal in Australia, California and Africa. To this day in the districts of Famaka and Fadasi, although almost every torrent brings down gold, it plays no part in native ornament or trade.

Lastly, we may reflect how eloquent for a savage is the silent language of bodily mutilation and disfigurement. As Théophile Gautier says: "Having no clothes to embroider, they embroider their skins." Tattooing serves for a tribal or family mark; it often indicates victorious campaigns, or announces a lad's arrival at manhood, and so also do various mutilations of teeth and artificial scars. Radiating or parallel lines of scars on cheek or breast, such as the Australians produce with no other apparent object save that of ornament, denote among the Shillooks, Tibboos, and other Africans, the loss of near kindred. Even if we cannot see in circumcision, or the amputation of a finger, any attempt at personal embellishment, in these and similar practices it is difficult to separate with a hard-and-fast line the motives of decoration, distinction, and fulfilment of a religious or social precept. Doubtless much of the ornamentation which is applied to the body is a mode of expressing the primitive artistic impulse upon which special attention is bestowed; and thus the tattooings of the New Zealanders, often the work of years to execute, and that at the cost of much labour and pain, must be reckoned among the most conspicuous achievements of the artistic sense and dexterity of that race. The Indians are less distinguished in this respect, while among the Negroes few devote so much attention to this branch of art as to the arrangement of their hair—a point in which they certainly surpass all races, being materially aided in this task by the stiff character of their wigs.

As in all primitive industries, we meet here, as a characteristic phenomenon, with endless variations on a limited theme. Thus some races take to painting, some to tattooing, some again to hairdressing. Customs affecting the same region of the body may often indicate relationships. Thus the Batokas knock out

their upper front teeth, causing the lower to project and push out the under lip. Their neighbours to the eastward, the Manganyas, wear a plug in their upper lip, often in the lower, and thereby arrive at a similar disfigurement. These luxuriant developments of the impulse for ornament exhibit the innate artistic sense of a race often in an astonishing phase, and it is not without interest to trace it from its crudest beginnings. The articles which savages use for ornament are calculated to show up against their dark skins. White shells, teeth, and such like, produce a very different effect on that background to what they offer on our pale hands or in dark cabinets. Hence we find far and wide painting with red and white—cosmetics were among the objects buried with their dead by the old Egyptians—dressing of the dark hair with white lime and similar artifices. But the highest summit of the art has been attained by the Monbuttus, who, in the great variety of patterns with which they paint their bodies, avoid harsh colours and elementary stripes and dots. The old people alone leave off adorning themselves and let the painting wear out; but it is at this age that the indelible tattooing begins to be valuable.

Among one and the same race, special decorative themes are generally adhered to most rigidly, and varied only within narrow limits. We must, however, beware of the temptation to read too much conscious intention into these manifold ornaments. In face of the tendency of prehistoric research to treat particular themes as the signatures, so to say, of the respective races, it is necessary specially to emphasize the space to be allowed for the play of caprice. It is true that you can always tell a Tongan club by the little human figures which stand out in the mosaic-like carved pattern; but here we have to deal with a limited area of culture, within which a great persistency of tradition can easily be aimed at. But would any one take the cross, which is so natural a motive in matted work, as it appears on the beautifully woven shields of the Nyam-Nyams, for an imitation of the Christian symbol, or ascribe the crescent on Polynesian carved work to the influence of Islam?

Among the other advantages enjoyed by the male sex is that of cultivating every kind of adornment to a greater extent, and

devoting more time to it. In the lowest groups of savages ornament follows the rule which is almost universal among the higher animals; the male is the more richly adorned. As is well known, civilization has pretty well reversed this relation, and the degree of progress to which a race has attained may to some extent be measured by the amount of the sacrifice which the men are prepared to make for the adornment of their women. Otherwise, in the most civilized communities, men only revert to the custom of adorning themselves when they happen to be soldiers or attendants at court.

A practical result of the tendency to luxury in the midst of destitution is the confinement of trade with the "natural" races to a small list of articles, the number of which is almost entirely limited by the purposes of ornament or pastime and sensual enjoyment. Of trade in the great necessaries of food and clothing there is hardly any. The objects exchanged, things of value and taste, are primarily luxuries. Setting aside the partly civilized inhabitants of the coast, and the European colonies, the important articles of the African trade are beads, brass wire, brass and iron rings, spirits, tobacco. The only articles in a different category which have attained to any importance are cotton goods and firearms.

Finally we may find a place in this section for those implements of the toilet wherewith all those works of art are performed upon which primitive man, in this respect nowise behind his civilized brother, bases his hope of pleasing and conquering. Let us hear how Schweinfurth describes the dressing case of a Bongo lady: "For pulling out eyelashes and eyebrows they make use of little tweezers. Peculiar to the women of the Bongos are the curious little elliptical knives fitted into a handle at both ends, sharpened on both edges and decorated with tooling in many patterns. These knives the women use for all their domestic operations, especially for peeling tubers, slicing cucumbers and gourds, and the like. Rings, bells of different kinds, clasps, and buttons, which are stuck into holes bored in their lips and ear lobes; with lancet-shaped hairpins, which seem necessary for parting and dividing their plaits, complete the Bongo lady's dressing-case." A pair of tweezers for thorns, in a case attached

to the dagger-sheath, forms part of the outfit in almost all parts of Africa. Many carry a porcupine's bristle or an ivory pin stuck into the hair to keep it smooth. Combs are well known to the Polynesians, the Arctic races and the Negroes.

While the civilized European regards cleanliness as the best adornment, even the Oriental is very far from giving it a high place. Barbarous races practise it when it does not cost too much trouble. In certain directions, however, it can become a custom; for example, the negro pays much more attention to keeping his teeth clean than the average European. The horror of ordure is often in truth superstitious, and in that case contributes to keep the neighbourhood of the huts cleanly. Furneaux was astonished to see latrines among the Maoris. But what especially promotes cleanliness is the absence or scantiness of clothing. Dirt as a general rule is principally met with among such races as are compelled by uncertainty of climate or by custom to keep their bodies always covered. A daily change will involve rapid wearing out, and for this reason they usually wear their clothes, as Jenghis Khan prescribed, until they drop off in tatters. In the most intimate family life, however, a reserve prevails among natural races which puts their civilized brethren to shame. Among Negroes, Malays, and Indians, it is widespread custom that parents and children should not sleep in the same room.—F. RATZEL, *History of Mankind*, 1:93–106.

FORM AND ORNAMENT IN CERAMIC ART

. . . . Ceramic art presents two classes of phenomena of importance in the study of the evolution of æsthetic culture. These relate, first, to *form* and second, to *ornament.*

Form, as embodied in clay vessels, embraces, 1st, *useful shapes* which may or may not be ornamental, and, 2d, *æsthetic shapes,* which are ornamental and may be useful. There are also *grotesque* and *fanciful shapes,* which may or may not be either useful or ornamental.

No form or class of forms can be said to characterize a particular age or stage of culture. In a general way, of course, the vessels of primitive peoples will be simple in form, while those of more advanced races will be more varied and highly specialized.

The shapes first assumed by vessels in clay depend upon the shape of the vessels employed at the time of the introduction of the art, and these depend, to a great extent, upon the kind and grade of culture of the people acquiring the art and upon the resources of the country in which they live. To illustrate: If, for instance, some of the highly advanced Alaskan tribes which do not make pottery should migrate to another habitat, less suitable to the practice of their old arts and well adapted to art in clay, and should there acquire the art of pottery, they would doubtless, to a great extent, copy their highly developed utensils of wood, bone, ivory, and basketry, and thus reach a high grade of ceramic achievement in the first century of the practice of the art; but, on the other hand, if certain tribes, very low in intelligence and having no vessel-making arts, should undergo a corresponding change of habitat and acquire the art of pottery, they might not reach in a thousand years, if left to themselves, a grade in the art equal to that of the hypothetical Alaskan potters in the first decade. It is, therefore, not the age of the art itself that determines its forms, but the grade and kind of art with which it originates and coexists.

Ornament is subject to similar laws. Where pottery is employed by peoples in very low stages of culture, its ornamentation will be of the simple archaic kind. Being a conservative art and much hampered by the restraints of convention, the elementary forms of ornament are carried a long way into the succeeding periods and have a very decided effect upon the higher stages. Pottery brought into use for the first time by more advanced races will never pass through the elementary stage of decoration, but will take its ornament greatly from existing art and carry this up in its own peculiar way through succeeding generations. The character of the ornamentation does not therefore depend upon the age of the art so much as upon the acquirements of the potter and his people in other arts.

ORIGIN OF FORM

In order to convey a clear idea of the bearing of the preceding statements upon the history of form and ornament, it will be necessary to present a number of points in greater detail.

The following synopsis will give a connected view of various possible origins of form.

Origin of form.....	By adventition.	
	By imitation.....	Of natural models.
		Of artificial models.
	By invention.	

Forms suggested by adventition.—The suggestions of accident, especially in the early stages of art, are often adopted, and become fruitful sources of improvement and progress. By such means the use of clay was discovered and the ceramic art came into existence. The accidental indentation of a mass of clay by the foot, or hand, or by a fruit-shell, or stone, while serving as an auxiliary in some simple art, may have suggested the making of a cup, the simplest form of vessel.

The use of clay as a cement in repairing utensils, in protecting combustible vessels from injury by fire, or in building up the walls of shallow vessels, may also have led to the formation of disks or cups, afterwards independently constructed. In any case the objects or utensils with which the clay was associated in its earliest use would impress their forms upon it. Thus, if clay were used in deepening or mending vessels of stone by a given people, it would, when used independently by that people, tend to assume shapes suggested by stone vessels. The same may be said of its use in connection with wood and wicker, or with vessels of other materials. Forms of vessels so derived may be said to have an adventitious origin, yet they are essentially copies, although not so by design, and may as readily be placed under the succeeding head.

Forms derived by imitation.—Clay has no inherent qualities of a nature to impose a given form or class of forms upon its products, as have wood, bark, bone, or stone. It is so mobile as to be quite free to take form from surroundings, and where extensively used will record or echo a vast deal of nature and of coexistent art.

In this observation we have a key that will unlock many of the mysteries of form.

In the investigation of this point it will be necessary to consider the processes by which an art inherits or acquires the forms of another art or of nature, and how one material imposes

its peculiarities upon another material. In early stages of culture the processes of art are closely akin to those of nature, the human agent hardly ranking as more than a part of the environment. The primitive artist does not proceed by methods identical with our own. He does not deliberately and freely examine all departments of nature or art and select for models those things most convenient or most agreeable to fancy; neither does he experiment with the view of inventing new forms. What he attempts depends almost absolutely upon what happens to be suggested by preceding forms, and so narrow and so direct are the processes of his mind that, knowing his resources, we could closely predict his results.

The range of models in the ceramic art is at first very limited, and includes only those utensils devoted to the particular use to which the clay vessels are to be applied; later, closely-associated objects and utensils are copied. In the first stages of art, when the savage makes a weapon, he modifies or copies a weapon; when he makes a vessel, he modifies or copies a vessel.

This law holds good in an inverse ratio to culture, varying to a certain extent with the character of the material used.

Natural originals.—Natural originals, both animal and vegetable, necessarily differ with the country and the climate, thus giving rise to individual characters in art forms often extremely persistent and surviving decided changes of environment.

The gourd is probably the most varied and suggestive natural vessel. We find that the primitive potter has often copied it in the most literal manner. One example only, out of the many available ones, is necessary. This is from a mound in southeastern Missouri.

In Fig. 464, *a* illustrates a common form of gourd, while *b* represents the imitation in clay.

All nations situated upon the sea or upon large rivers use shells of mollusks, which, without modification, make excellent receptacles for water and food. Imitations of these are often found among the products of the potter's art. A good example from the Mississippi Valley is shown in Fig. 465, *a* being the original and *b* the copy in clay.

In Africa, and in other countries, such natural objects as cocoanut shells, and ostrich eggs are used in like manner.

Another class of vessels, those made from the skins, bladders, and stomachs of animals, should also be mentioned in this connection, as it is certain that their influence has frequently been felt in the conformation of earthen utensils.

In searching nature, therefore, for originals of primitive ceramic forms we have little need of going outside of objects that in their natural or slightly altered state are available for vessels.

True, other objects have been copied. We find a multitude of the higher forms, both animal and vegetable, embodied in vessels of clay, but their presence is indicative of a somewhat advanced stage of art, when the copying of vessels that were functionally proper antecedents had given rise to a familiarity with the use of clay and a capacity in handling it that, with advancing culture, brought all nature within the reach of the potter and made it assist in the processes of variation and development.

Artificial originals.—There is no doubt that among most peoples art had produced vessels in other materials antecedent to the utilization of clay. These would be legitimate models for the potter and we may therefore expect to find them repeated in earthenware. In this way the art has acquired a multitude of new forms, some of which may be natural forms at second hand, that is to say, with modifications imposed upon them by the material in which they were first shaped. But all materials other than clay are exceedingly intractable, and impress their own characters so decidedly upon forms produced in them that ultimate originals, where there are such, cannot often be traced through them.

It will be most interesting to note the influence of these peculiarities of originals upon the ceramic art.

A nation having stone vessels, like those of California, on acquiring the art of pottery would use the stone vessels as models, and such forms as that given in Fig. 466 would arise, *a* being in stone and *b* in clay, the former from California and the latter from Arizona.

Similar forms would just as readily come from gourds, baskets, or other globular utensils.

Nations having wooden vessels would copy them in clay on acquiring the art of pottery. This would give rise to a distinct group of forms, the result primarily of the peculiarities of the woody structure. . . . .

MODIFICATION OF FORM

Incapacity of material.—It is evident at a glance that clay lacks the capacity to assume and to retain many of the details of form found in antecedent vessels. This necessarily results in the alteration or omission of these features, and hence arise many modifications of original forms.

The simple lack of capacity on the part of the potter who undertook to reproduce a model would lead to the modification of all but the most simple shapes.

The acquisition of the art by a superior or an inferior race, or one of different habits would lead to decided changes. A people accustomed to carrying objects upon the head, on acquiring earthen vessels would shape the bases and the handles to facilitate this use.

Improvements in the methods of manufacture are of the greatest importance in the progress of an art. The introduction of the lathe, for example, might almost revolutionize form in clay.

As arts multiply, clay is applied to new uses. Its employment in the manufacture of lamps, whistles, or toys would lead to a multitude of distinct and unique forms.

The acquisition of a new vessel-making material by a nation of potters and the association of the forms developed through its inherent qualities or structure would often lead ceramic shapes into new channels.

The contact of a nation of potters with a nation of carvers in wood would tend very decidedly to modify the utensils of the former. One example may be given which will illustrate the possibilities of such exotic influences upon form. In Fig. 473, *a*, we have an Alaskan vessel carved in wood. It represents a beaver grasping a stick in its hands and teeth. The conception is so unusual and the style of vessel so characteristic of the people that we should not expect to find it repeated in other regions;

but the ancient graves of the Middle Mississippi Valley have furnished a number of very similar vessels in clay, one of which is outlined in *b*. While this remarkable coincidence is suggestive of ethnic relationships which do not call for attention here, it serves to illustrate the possibilities of modification by simple contact.

A curious example illustrative of possible transformation by adventitious circumstances is found in the collection from the province of ancient Tusayan. A small vessel of sphynx-like appearance, possibly derived more or less remotely from a skin vessel, has a noticeable resemblance to some life form, Fig. 474, *a*. The fore-legs are represented by two large bosses, the wide-open mouth takes the place of the severed neck, and a handle connects the top of the rim with the back of the vessel. The handle being broken off and the vessel inverted, *b*, there is a decided change; we are struck by the resemblance to a frog or toad. The original legs, having dark concentric lines painted around them, look like large protruding eyes, and the mouth gapes in the most realistic manner, while the two short broken ends of the handle resemble legs and serve to support the vessel in an upright position, completing the illusion. The fetich-hunting Pueblo Indian, picking up this little vessel in its mutilated condition, would probably at once give to it the sacred character of the water animal which it resembles, and it might readily transmit its peculiarities of form to other generations of vessels.

It is not necessary in this study to refer at length to the influence of metallic vessels upon ceramic forms. They do not usually appear until the ceramic art is far advanced and often receive a heritage of shape from earthen forms. Afterwards, when the inherent qualities of the metal have stamped their individuality upon utensils, the debt is paid back to clay with interest, as will be seen by reference to later forms in many parts of the world.

To enhance usefulness.—There can be no doubt that the desire upon the part of the archaic potter to increase the usefulness and convenience of his utensils has been an important agent in the modification of form. The earliest vessels employed were often clumsy and difficult to handle. The favorite conch shell would hold water for him who wished to drink, but the breaking

away of spines and the extraction of the interior whorl improved it immeasurably. The clumsy mortar of stone, with its thick walls and great weight, served a useful purpose, but it needed a very little intelligent thought to show that thin walls and neatly-trimmed margins were much preferable.

Vessels of clay, aside from the forms imposed upon them by their antecedents and associates, would necessarily be subject to changes suggested by the growing needs of man. These would be worked out with ever-increasing ease by his unfolding genius for invention. Further investigation of this phase of development would carry me beyond the limits set for this paper.

To please fancy.—The skill acquired by the handling of clay in constructing vessels and in efforts to increase their usefulness would open an expansive field for the play of fancy. The potter would no sooner succeed in copying vessels having life form than he would be placed in a position to realize his capacity to imitate forms not peculiar to vessels. His ambition would in time lead him even beyond the limits of nature and he would invade the realm of imagination, embodying the conceptions of superstition in the plastic clay. This tendency would be encouraged and perpetuated by the relegation of vessels of particular forms to particular ceremonies.

ORIGIN OF ORNAMENT

The birth of the embellishing art must be sought in that stage of animal development when instinct began to discover that certain attributes or adornments increased attractiveness. When art in its human sense came into existence ideas of embellishment soon extended from the *person,* with which they had been associated, to all things with which man had to deal. The processes of the growth of the æsthetic idea are long and obscure and cannot be taken up in this place.

The various elements of embellishment in which the ceramic art is interested may be assigned to two great classes, based upon the character of the conceptions associated with them. These are *ideographic* and *non-ideographic.* In the present paper I shall treat chiefly of the non-ideographic, reserving the ideographic for a second paper.

Elements, non-ideographic from the start, are derived mainly

from two sources: 1st, from objects, natural or artificial, associated with the arts; and, 2d, from the suggestions of accidents attending construction. Natural objects abound in features highly suggestive of embellishment and these are constantly employed in art. Artificial objects have two classes of features capable of giving rise to ornament: these are *constructional* and *functional*. In a late stage of development all things in nature and in art, however complex or foreign to the art in its practice, are subject to decorative treatment. This latter is the realistic pictorial stage, one of which the student of native American culture needs to take little cognizance.

Elements of design are not invented outright: man modifies, combines, and recombines elements or ideas already in existence, but does not create. . . . .

Suggestions of natural features of objects.—The first articles used by men in their simple arts have in many cases possessed features suggestive of decoration. Shells of mollusks are exquisitely embellished with ribs, spines, nodes, and colors. The same is true to a somewhat limited extent of the shells of the turtle and the armadillo and of the hard cases of fruits.

These decorative features, though not essential to the utensil, are nevertheless inseparable parts of it, and are cast or unconsciously copied by a very primitive people when similar articles are artificially produced in plastic material. In this way a utensil may acquire ornamental characters long before the workman has learned to take pleasure in such details or has conceived an idea beyond that of simple utility. This may be called unconscious embellishment. In this fortuitous fashion a ribbed variety of fruit shell would give rise to a ribbed vessel in clay; one covered with spines would suggest a noded vessel, etc. When taste came to be exercised upon such objects these features would be retained and copied for the pleasure they afforded.

Passing by the many simple elements of decoration that by this unconscious process could be derived from such sources, let me give a single example by which it will be seen that not only elementary forms but even so highly constituted an ornament as the scroll may have been brought thus naturally into the realm of decorative art. The sea-shell has always been intimately asso-

464a

464b

476a 476b 476c

465a

465b

477a 477b 477c 477d

473a

473b

478a

478b

474a

474b

479a

479b

475a

475b

480a

480b

ciated with the arts that utilize clay and abounds in suggestions of embellishment. The *Busycon* was almost universally employed as a vessel by the tribes of the Atlantic drainage of North America. Usually it was trimmed down and excavated until only about three-fourths of the outer wall of the shell remained. At one end was the long spike-like base which served as a handle, and at the other the flat conical apex, with its very pronounced spiral line or ridge expanding from the center to the circumference, as seen in Fig. 475 *a*. This vessel was often copied in clay, as many good examples now in our museums testify. The notable feature is that the shell has been copied literally, the spiral appearing in its proper place. A specimen is illustrated in Fig. 475 *b* which, although simple and highly conventionalized, still retains the spiral figure.

In another example we have four of the noded apexes placed about the rim of the vessel, as shown in Fig. 476 *a*, the conception being that of four conch shells united to one vessel, the bases being turned inward and the apexes outward. Now it is only necessary to suppose the addition of the spiral lines, always associated with the nodes, to have the result shown in *b*, and by a still higher degree of convention we have the classic scroll ornament given in *c*. Of course, no such result as this could come about adventitiously, as successful combination calls for the exercise of judgment and taste; but the initiatory steps could be taken—the motive could enter art—without the conscious supervision of the human agent.

SUGGESTIONS BY FEATURES OF ARTIFICIAL OBJECTS

Functional features.—Functional features of art products liable to influence ornament comprise handles, legs, feet, rims, bands, and other peculiarities of shape originating in utility. Handles, for instance, may have been indigenous to a number of arts; they are coeval and coextensive with culture. The first load, weapon, or vessel transported by man may have been suspended by a vine or filament. Such arts as have fallen heir to handles have used them according to the capacities of the material employed. Of all the materials stone is probably the least suited to their successful use, while clay utilizes them in its own peculiar way, giving to them a great variety of expression.

They are copied in clay from various models, but owing to the inadequate capacities of the material, often lose their function and degenerate into mere ornaments, which are modified as such to please the potter's fancy. Thus, for example, the series of handles placed about the neck of the vessel become, by modification in frequent copying, a mere band of ornamental figures in relief, or even finally in engraved, punctured, or painted lines, in the manner suggested in Fig. 477. Legs, pedestals, spouts, and other features may in a like manner give rise to decoration.

Constructional features.—Features of vessels resulting from construction are infinitely varied and often highly suggestive of decoration. Constructional peculiarities of the clay utensils themselves are especially worthy of notice, and on account of their actual presence in the art itself are more likely to be utilized or copied for ceramic ornament than those of other materials. The coil, so universally employed in construction, has had a decided influence upon the ceramic decoration of certain peoples, as I have shown in a paper on ancient Pueblo art. From it we have not only a great variety of surface ornamentation produced by simple treatment of the coil in place, but probably many forms suggested by the use of the coil in vessel building, as, for instance, the spiral formed in beginning the base of a coiled vessel, Fig. 478 *a*, from which the double scroll *b*, as a separate feature, could readily be derived, and finally the chain of scrolls so often seen in border and zone decoration. This familiarity with the use of fillets or ropes of clay would also lead to a great variety of applied ornament, examples of which, from Pueblo art, are given in Fig. 479. The sinuous forms assumed by a rope of clay so employed would readily suggest to the Indian the form of the serpent and the means of representing it, and might thus lead to the introduction of this much revered creature into art.

Of the various classes of utensils associated closely with the ceramic art, there are none so characteristically marked by constructional features as nets and wicker baskets. The twisting, interlacing, knotting, and stitching of filaments give relieved figures that by contact in manufacture impress themselves upon the plastic clay. Such impressions come in time to be regarded as pleasing features, and when free-hand methods of reproducing

are finally acquired they and their derivatives become essentials of decoration. At a later stage these characters of basketry influence ceramic decoration in a somewhat different way. By the use of variously-colored fillets the woven surface displays figures in color corresponding to those in relief and varying with every new combination. Many striking patterns are thus produced, and the potter who has learned to decorate his wares by the stylus or brush reproduces these patterns by free-hand methods. We find pottery in all countries ornamented with patterns, painted, incised, stamped, and relieved, certainly derived from this source. So well is this fact known that I need hardly go into details.

In the higher stages of art the constructional characters of architecture give rise to many notions of decoration which afterwards descend to other arts, taking greatly divergent forms. Aboriginal architecture in some parts of America, had reached a development capable of wielding a strong influence. This is not true, however, of any part of the United States.

Besides the suggestions of surface features impressed in manufacture or intentionally copied as indicated above, we have also those of accidental imprints of implements or of the fingers in manufacture. From this source there are necessarily many suggestions of ornament, at first of indented figures, but later, after long employment, extending to the other modes of representation.

Non-ideographic forms of ornament may originate in ideographic features, mnemonic, demonstrative, or symbolic. Such significant features are borrowed by decorators from other branches of art. As time goes on they lose their significance and are subsequently treated as purely decorative elements. Subjects wholly pictorial in character, when such come to be made, may also be used as simple decoration, and by long processes of convention become geometric.

The exact amount of significance still attached to significant figures after adoption into decoration cannot be determined except in cases of actual identification by living peoples, and even when the signification is known by the more learned individuals the decorator may be wholly without knowledge of it.

481a

481c

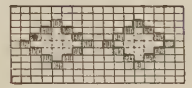
481b

481d

482a

482b

483a



483b

484a

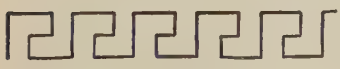
484b

488a

489a

488b

489b

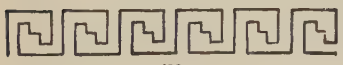


488c

489c

488d

489d



488e

489e

MODIFICATION OF ORNAMENT

There are comparatively few elementary ideas prominently and generally employed in primitive decorative art. New ideas are acquired, as already shown, all along the pathway of progress. None of these ideas retain a uniform expression, however, as they are subject to modification by environment just as are the forms of living organisms. A brief classification of the causes of modification is given in the following synopsis:

Modification of ornament..... { Through material. / Through form. / Through methods of realization.

Through material.—It is evident at a glance that *material* must have a strong influence upon the forms assumed by the various decorative motives, however derived. Thus stone, clay, wood, bone, and copper, although they readily borrow from nature and from each other, necessarily show different decorative results. Stone is massive and takes form slowly and by peculiar processes. Clay is more versatile and decoration may be scratched, incised, painted, or modeled in relief with equal facility, while wood and metal engender details having characters peculiar to themselves, producing different results from the same motives or elements. Much of the diversity displayed by the art products of different countries and climates is due to this cause.

Peoples dwelling in arctic climates are limited, by their materials, to particular modes of expression. Bone and ivory as shaped for use in the arts of subsistence afford facilities for the employment of a very restricted class of linear decoration, such chiefly as could be scratched with a hard point upon some irregular, often cylindrical, implements. Skins and other animal tissues are not favorable to the development of ornament, and the textile arts—the greatest agents of convention—do not readily find suitable materials in which to work.

Decorative art carried to a high stage under arctic environment would be more likely to achieve unconventional and realistic forms than if developed in more highly favored countries. The accurate geometric and linear patterns would hardly arise.

Through form.—Forms of decorated objects exercise a strong

influence upon the decorative designs employed. It would be more difficult to tattoo the human face or body with straight lines or rectilinear patterns than with curved ones. An ornament applied originally to a vessel of a given form would accommodate itself to that form pretty much as costume becomes adjusted to the individual. When it came to be required for another form of vessel, very decided changes might be necessary.

With the ancient Pueblo peoples rectilinear forms of meander patterns were very much in favor and many earthen vessels are found in which bands of beautiful angular geometric figures occupy the peripheral zone, Fig. 480 *a*, but when the artist takes up a mug having a row of hemispherical nodes about the body, *b*, he finds it very difficult to apply his favorite forms and is almost compelled to run spiral curves about the nodes in order to secure a neat adjustment.

Through methods of realization.—It will readily be seen that the forms assumed by a motive depend greatly upon the character of the mechanical devices employed. In the potter's art devices for holding and turning the vessel under manipulation produce peculiar results.

In applying a given idea to clay much depends upon the method of executing it. It will take widely differing forms when executed by incising, by modeling, by painting, and by stamping.

Intimately associated with methods of execution are peculiarities of construction, the two agencies working together in the processes of modification and development of ornament.

I have previously shown how our favorite ornament, the scroll, in its disconnected form may have originated in the copying of natural forms or through the manipulation of coils of clay. I present here an example of its possible origin through the modification of forms derived from constructional features of basketry. An ornament known as the guilloche is found in many countries. The combination of lines resembles that of twisted or platted fillets of wood, cane, or rushes, as may be seen at a glance, Fig. 481 *a*. An incised ornament of this character, possibly derived from basketry by copying the twisted fillets or their impressions in the clay, is very common on the pottery of the mounds of the Mississippi Valley, and its variants form a most interesting

study. In applying this to a vessel the careless artist does not properly connect the ends of the lines which pass beneath the intersecting fillets, and the parts become disconnected, *b*. In many cases the ends are turned in abruptly as seen in *c*, and only a slight further change is necessary to lead to the result, *d*, the running scroll with well-developed links. All of these steps may be observed in a single group of vessels.

It may be thought by some that the processes of development indicated above are insufficient and unsatisfactory. There are those who, seeing these forms already endowed with symbolism, begin at what I conceive to be the wrong end of the process. They derive the form of symbol directly from the thing symbolized. Thus the current scroll is, with many races, found to be a symbol of water, and its origin is attributed to a literal rendition of the sweep and curl of the waves. It is more probable that the scroll became the symbol of the sea long after its development through agencies similar to those described above, and that the association resulted from the observation of incidental resemblances. This same figure, in use by the Indians of the interior of the continent, is regarded as symbolic of the whirlwind, and it is probable that any symbol-using people will find in the features and phenomena of their environment, whatever it may be, sufficient resemblance to any of their decorative devices to lead to a symbolic association.

One secret of modification is found in the use of a radical in more than one art, owing to differences in constructional characters. For example, the tendency of nearly all woven fabrics is to encourage, even to compel, the use of straight lines in the decorative designs applied. Thus the attempt to employ curved lines would lead to stepped or broken lines. The curvilinear scroll coming from some other art would be forced by the constructional character of the fabric into square forms, and the rectilinear meander or fret would result, as shown in Fig. 482, *a* being the plain form, painted, engraved, or in relief, and *b* the same idea developed in a woven fabric. Stone or brick-work would lead to like results, Fig. 483; but the modification could as readily move in the other direction. If an ornament originating in the constructional character of a woven fabric, or re-

modeled by it, and hence rectilinear, should be desired for a smooth structureless or featureless surface, the difficulties of drawing the angular forms would lead to the delineation of curved forms, and we would have exactly the reverse of the order shown in Figs. 482 and 483. The two forms given in Fig. 484 actually occur in one and the same design painted upon an ancient Pueblo vase. The curved form is apparently the result of careless or hurried work, the original angular form having come from a textile source.

Many excellent examples illustrative of this tendency to modification are found in Pueblo art. Much of the ornament applied to pottery is derived from the sister art, basketry. In the latter art the forms of decorative figures are geometric and symmetrical to the highest degree, as I have frequently pointed out. The rays of a radiating ornament, worked with the texture of a shallow basket, spring from the center and take uniform directions toward the margin. . . . . But when a similar idea derived from basketry (as it could have no other origin) is executed in color upon an earthen vessel, we observe a tendency to depart from symmetry as well as from consistency. . . . .

The growth of decorative devices from the elementary to the highly constituted and elegant is owing to a tendency of the human mind to elaborate because it is pleasant to do so or because pleasure is taken in the result, but there is still a directing and shaping agency to be accounted for.

I have already shown that such figures as the scroll and the guilloche are not *necessarily* developed by processes of selection and combination of simple elements, as many have thought, since they have come into art at a very early stage almost full-fledged; but there is nothing in these facts to throw light upon the processes by which ornament followed particular lines of development throughout endless elaboration. In treating of this point, Prof. C. F. Hartt maintained that the development of ornamental designs took particular and uniform directions owing to the structure of the eye, certain forms being chosen and perpetuated because of the pleasure afforded by movements of the eye in following them. In connection with this hypothesis, for it is nothing more, Mr. Hartt advanced the additional idea, that in

unison with the general course of nature decorative forms began with simple elements and developed by systematic methods to complex forms. Take for example the series of designs shown in Fig. 488. The meander *a* made up of simple parts would, according to Mr. Hartt, by further elaboration under the supervision of the muscles of the eye, develop into *b*. This, in time, into *c*, and so on until the elegant anthemium was achieved. The series shown in Fig. 489 would develop in a similar way, or otherwise would be produced by modification in free-hand copying of the rectilinear series. The processes here suggested, although to all appearances reasonable enough, should not be passed over without careful scrutiny.

Taking the first series, we observe that the ornaments are projected in straight continuous lines or zones, which are filled in with more or less complex parts, rectilinear and geometrically accurate. Still higher forms are marvelously intricate and graceful, yet not less geometric and symmetrical.

Let us turn to the primitive artisan, and observe him at work with rude brush and stylus upon the rounded and irregular forms of his utensils and weapons, or upon skins, bark, and rock surfaces. Is it probable that with his free hand directed by the eye alone he will be able to achieve these rhythmic geometric forms. It seems to me that the whole tendency is in the opposite direction. I venture to surmise that if there had been no other resources than those named above the typical rectilinear fret would never have been known, at least to the primitive world; for, notwithstanding the contrary statement by Professor Hartt, the fret is in its more highly-developed forms extremely difficult to follow with the eye and to delineate with the hand. Until arts, geometric in their construction, arose to create and to combine mechanically the necessary elements and motives, and lead the way by a long series of object-lessons to ideas of geometric combination, our typical border ornament would not be possible. Such arts are the textile arts and architecture. These brought into existence forms and ideas not met with in nature and not primarily thought of by man, and combined them in defiance of human conceptions of grace. Geometric ornament is the offspring of technique.—W. H. Holmes, *Reports of the Bureau of Ethnology*, 4:444–65

THE DANCE

While the significance which pictorial art in lifeless material has acquired among the higher peoples can be discerned, at least in the germ, among the lower tribes, the great social power which the living picture, the dance, once possessed, can hardly be guessed to-day. The modern dance is only a degenerated æsthetical and social remnant; the primitive dance is the most immediate, most perfect, and most efficient expression of the primitive æsthetic feeling.

The characteristic mark of the dance is the rhythmical order of the motions. There is no dance without rhythm. The dances of hunting peoples can be divided, according to their character, into two groups—mimetic and gymnastic dances. The mimetic dances consist of rhythmical imitations of the motions of animals and men, while the movements in gymnastic dances follow no natural model. Both kinds appear side by side among the most primitive tribes.

Best known are the gymnastic dances of the Australians, the *corroborries,* which have been described in nearly every account of Australian travel, for they are known over the whole continent. The *corroborries* are always performed at night, and generally by moonlight. We do not, however, consider it necessary, for that reason, to regard them as religious ceremonies. Moonlight nights are chosen probably not because they are holy, but because they are clear. The dancers are usually men, while women form the orchestra. Frequently several tribes join in a great dancing festival; four hundred participants having occasionally been counted in Victoria. The largest and most noteworthy festivals apparently take place on the conclusion of a peace; moreover, all the more important events of Australian life are celebrated by dances—the ripening of a fruit, the beginning of the oyster dredging, the initiation of the youth, a meeting with a friendly tribe, the march to battle, a successful hunt. The *corroborries* of different occasions and of different tribes are so like one another that the observer is acquainted with them all when he has seen one. Let us suppose ourselves attending one described by Thomas in the colony of Victoria. The scene is a clearing in the bush. In the middle of it blazes a large fire, the ruddy glare

of which is mingled with the bluish light of the full moon. The dancers are not yet visible; they have retired into the dark shrubbery to put on their festal decorations. On one side of the fire are assembled the women who are to form the orchestra. All at once a crackling and rustling are heard, and the dancers appear. The thirty men who have entered within the circle of the firelight have all painted, with white earth, rings around the eyes and long streaks on the body and limbs. They wear, besides, tufts of leaves on their ankles and an apron of hide around their loins. Meanwhile the women have arranged themselves, facing one another, into a horseshoe-shaped group. They are entirely naked. Each holds on her knees a neatly folded and tightly stretched opossum skin, which serves at other times as a robe. Between them and the fire stands the director. He wears the usual apron of opossum skin, and holds a stick in each hand. The spectators sit or stand around in a large circle. The director casts a searching glance at the dancers, then turns and slowly approaches the women. He strikes his two sticks abruptly together; the dancers have arranged themselves with the rapidity of lightning in a line, and advance; then they halt. A new pause, while the director reviews the line. All is in order, and now at last he gives the signal. He begins by beating the time with his two sticks; the dancers fall in with the movement; the women sing and beat on the opossum hides, and the *corroborry* begins. It is astonishing how accurately the time is kept; the tunes and the movements are all in unison. The dancers move as smoothly as the best-trained ballet-troupe. They assume all possible positions, sometimes springing aside, sometimes advancing, sometimes retiring one or two steps; they stretch and bend themselves, swing their arms and stamp with their feet. Nor is the director idle. While he is beating the time with his sticks, he continually executes a peculiar nasal song, louder or more softly by turn, as he makes a step forward or backward. He does not stand in the same place for an instant; now he turns toward the dancers, now toward the women, who then lift up their voices with all their might. The dancers gradually become more excited; the time-sticks are struck faster; the motions become more rapid and vigorous; the dancers shake

themselves, spring into the air to an incredible height, and finally utter a shrill cry, as if from one mouth. An instant later, and they have all vanished into the bushes as suddenly as they came out of them. The place remains empty for a while. Then the director gives the signal anew, and the dancers again appear. This time they form a curved line. In other respects the second part is like a continuation of the first one. The women advance, beating and singing at times as loud as if they would split their throats, at other times so softly that their murmuring is hardly audible. The ending is similar to that of the first part; and a third, fourth, and fifth act are performed in a similar style. At one time, however, the dancers form a band four files deep: the first line springs aside; those behind it advance, and in this way the mass moves forward toward the women. The troop looks now like an inextricable tangle of bodies and limbs; and one would think the dancers were about to break one another's skulls with their wildly brandished sticks. But in reality a strict regulation prevails now as in the earlier part of the dance. The excitement is at its height; the dancers cry out, stamp, and jump; the women beat time as if they were crazy, and sing with all the strength of their lungs; the fire, which is blazing up high, scatters a shower of red sparks over the wild scene; and then the director raises his arms high over his head; a loud clapping breaks through the tumult, and the next instant the dancers are gone. The women and the spectators rise and disperse to their *miams*. A half hour later nothing is stirring in the moonlit clearing except the waning fire. Such is an Australian *corroborry*.

The *corroborry* of the men, as we have said, always offers substantially the same spectacle, but the dance of the women, which is apparently much more rarely introduced, presents a very different character. We owe the best description of the woman's dance to Eyre. "The dancing women," he says, "clasp their hands over their heads, lock their feet, and press their knees together. Then the legs are thrown outward from the knee—while the feet and hands remain in their original position—and are brought together again so quickly as to give a sharp sound when they strike. This dance is performed either by one girl

alone, or by several, at pleasure. Sometimes, too, a woman dances it alone before a file of male dancers in order to excite their passion. In another figure the feet are kept close together on the ground, and the dancers move forward, while describing a small semicircle, by a peculiar wriggling of the body. This dance is almost solely performed by young girls in concert." The *corroborries* of the Tasmanians, so far as can be judged from the scanty accounts we have of them, did not differ from those of the Australians.

The striking resemblance which we have so far remarked at every step between the Australians and the Mincopies extends also to the dance. The dances of the Mincopies so resemble those of the Australians that they might be interchangeable with them. The occasions are the same—a visit of friends, and beginning of a season, recovery from illness, and the end of a period of mourning; in short, every event which would excite a joyful feeling in the people. In addition to these, larger festivals are celebrated, to which several tribes resort. On a little clearing in the midst of the thick jungle, says Man, are collected more than a hundred bepainted men and women. The moon pours down its soft light, while out of every hut the ruddy glow of fires casts wierd shadows through the scattered groups. On one side sit in a row the women who are to sing in chorus the refrain of the dancing song; on the other side are seen the dusky forms of the spectators, many of whom take part in the performance by clapping their hands in unison. The director, who is likewise the poet and composer of the dance melody, stations himself where he can be seen by all; his foot resting on the narrow end of the sounding-board, and, supporting his body on a spear or a bow, he beats the time for the singers and dancers, tapping on the sounding-board with the sole or the heel of his other foot. During his solo, which has the character of a recitative, all the other voices are silent, and the spectators remain motionless; but as soon as the sign for the refrain is given, a number of dancers plunge in wild excitement into the arena, and, while performing their parts with passionate energy, the song of the women becomes stronger. The dancer bends his back and throws his whole weight upon one leg, which is bent

at the knee. His hands are extended forward at the height of his breast, the thumb of one being held between the thumb and forefinger of the other, while the other fingers are extended upward. In this position he advances, hopping on one foot and stamping on the ground with the other at every second motion. He thus crosses the whole arena forward and backward, to the time of the sounding-board and the song. When the dancer tires, he indulges himself in a little change by giving the time in a peculiar fashion, bending his knees and raising his heels from the ground exactly according to the measure. As in Australia, in the Adaman Islands the women do not take part in the dances of men. But they have their own dances, which, according to the accounts of some eyewitnesses, are of rather doubtful propriety. Man's description, however, furnishes nothing remarkable concerning them. He says that the women swing their arms forward and backward, while their knees are bent and moved up and down. Now and then the dancer advances two steps and begins the movements anew.

The Bushmen have so lively a talent for mimicry that we might expect to see it exercised in their dances. Nevertheless, the accounts, which are scanty enough, mention only gymnastic dancers. The most complete description of a Bushman dance is found in Burchell. The dance took place in the evening in a hut that belonged to the head man, "and there were in it as many persons of both sexes as could sit in a circle and leave the dancers standing room. A bright fire was blazing close by the entrance. The dancer was in an ecstacy of vivacity and satisfaction, in which he cared for nothing about him and hardly thought of himself. As an adult can hardly stand up, even in the largest hut, the dancer was obliged to support himself on two long sticks, which he held in his hands and which rested on the floor as far apart as was conveniently practicable. Consequently his body was bent forward in an extremely constrained position, and a very awkward one for dancing. On the other hand, his limbs were not restrained by clothing, for he wore nothing but his jackal's skin. In this position he danced without pausing. Sometimes he did not even support himself on the sticks. It was the privilege of each of the company, when his turn came,

to take his place and dance as long as he pleased; then another put on the rattle, which is there generally used. This dance is peculiar, and so far as I know there is nothing like it among any other savage tribes on the globe. One foot was firmly planted, while the other was kept in rapid and irregular motion, but without suffering any notable change of place, although the knee and lower part of the leg moved hither and thither as far as the position permitted. The arms, having to support the body, were only slightly moved. The dancer sang all the while, keeping time with his movements. Sometimes he let his body down and raised it again quickly, till at last, wearied by the difficult motions, he sank to the ground to catch his breath. He continued to sing, however, and moved his body, keeping time with the singing of the spectators. After a few minutes he rose again and resumed his dance with new vigour. When one leg was tired, or when the course of the dance brought it about, the turn of the other came. The dancer wore a kind of rattle on each ankle, which was made of four springboks' ears joined together, containing a number of pieces of ostrich-egg shells, which gave at each movement of the foot a sound that was not unpleasant or harsh, and considerably enhanced the effect of the performance. Although only one person could dance at a time, the whole company present took part in the ceremony, all the members, as well as the dancers, accompanying and assisting in the evening's entertainment. This accompaniment consisted of singing and drumming; all sang and kept time by gently clapping their hands. The words they used, which mean nothing in themselves, were *Ae-o, ae-o,* continually repeated. The hands were struck together at the sound *O*, and the dancer pronounced the syllables *Wa-wa-kuh.* Neither sex was excluded from the singing, and, though the voices did not all give the same tone, they were still in good accord. The girls sang five or six tones higher, and in a much more animated manner." A dance which was performed in the open air in the presence of Arbousset and Daumas was of an entirely different character. The Bushmen, according to their account, "would not dance until they had eaten and were full, and then in the middle of the kraal by moonlight. The movements consisted of irregular leaps, and

were, to borrow a native comparison, like those of a herd of gambolling calves. The dancers jumped till they were tired out and covered with perspiration. The thousand-voice cries they uttered and the movements they executed were so difficult that now one, now another were seen to fall to the ground completely exhausted and covered with blood, which streamed from their nostrils. On that account this dance was called *mokoma,* or blood dance."

Our information concerning the dances of the Fuegians is very scanty. Dramatic representations, some of which may be mimetic dances, are mentioned of only one tribe, the Yahgans. Of gymnastic dances among them we know absolutely nothing, but we should not therefore presume that they have none. Of the dances of the Botocudo, too, not a word can be found in most of the accounts. The Prince of Wied expressly denied that there were any, but Ehrenreich saw some after the prince's visit and has described them: "On festive occasions, as when a successful hunt or a victory is celebrated or a stranger is received, the whole horde collects at night around the camp fire for the dance. Men and women form a circle in motley arrangement, each dancer places his arms around the necks of his neighbours, and then the whole circle begins to turn toward the right or the left, all stamping at once lustily with the foot of the side toward which they are turning and drawing the other foot quickly after it. Soon with bowed heads they press more and more closely upon one another, after which they break ranks. All the while a monotonous song is sung, the time of which is followed by the feet."

Among the Eskimo, at least in the descriptions, the gymnastic dances are of somewhat less account than the mimetic. "The dances," says Boas, "are held in summer in the open air, but in winter in a feast-house built on purpose for them. This house is a large dome of snow, about fifteen English feet high and twenty feet in diameter. In the middle of it is a pillar of snow about five feet high on which the lamps stand. When the villagers collect in this building for singing and dancing, the married women station themselves in a line along the wall and the unmarried ones form a second concentric circle, while the

men sit in the inner circle. The children form two groups by the sides of the door. At the beginning of the festival one of the men seizes the drum, steps into the open space near the door, and begins to sing and dance. The songs are composed by the singer himself, and satirical compositions are most in favour on these occasions. While the men are silently listening, the women join in a chorus with the words *'amna aya.'* The dancer, who remains at the same place, stamps rhythmically with his feet and swings his body hither and thither, beating the drum all the time. While dancing he strips himself to the waist, keeping on only his breeches and boots." In another gymnastic dance, which Bancroft, for some reason unmentioned, calls the national dance of the Eskimo, each of the girls steps in succession into the midst of the circle while the others dance around her with hands entwined, singing. "The most extravagant motions gain the greatest applause." While the gymnastic dances are usually solos, several actors may appear at the same time in the mimetic dances. "The dancers, who are commonly young men, bare themselves to the waist or even appear quite naked. They execute numerous burlesque imitations of birds and animals, while their movements are accompanied with the beating of tambourines and singing They are sometimes fantastically dressed in breeches of sealskin and reindeer hide and wear feathers or a coloured cloth on their heads." The representations are, however, not limited to animal life. A monotonous refrain, accompanied by drumming, calls one young man after another upon the dancing place till a circle of about twenty is formed. Then begins a series of pantomimic representations of love, jealousy, hatred, and friendship."

As compared with the uniform character of the *corroborry*, the mimetic dances in Australia afford a great diversity. The animal dances, again, have the first place. There are emu, dingo, frog, and butterfly dances, but no other seems to enjoy such general popularity as the kangaroo dance, which has been described by numerous travellers. All agree in admiring the mimetic talent which the natives display in them. Nothing more comical and no more successful imitation, says Mundy, could be imagined than to see the dancers all hopping round in rivalry.

Eyre saw the kangaroo dance on Lake Victoria "so admirably executed that it would have called down thunders of applause in any European theatre." Subjects for mimetic dances are afforded by the two most important events of human life—love and the battle. Mundy describes a mimic war dance which he saw in New South Wales. The dancers performed first a series of complicated and wild movements in which clubs, spears, boomerangs, and shields were brandished. Then "all at once the mass divided into groups, and with deafening shrieks and passionate cries they sprang upon one another in a hand-to-hand fight. One side was speedily driven out of the field and pursued into the darkness, whence howls, groans, and the strokes of clubs could be heard, producing the perfect illusion of a terrible massacre. Suddenly the whole troupe again came up close to the fire, and having arranged themselves in two ranks, the time of the music was changed. The dancers moved in slower rhythm, accompanying every step with stamping and a grunting sound. Gradually the drum beats and the movements became more rapid till they attained as nearly a lightning-like velocity as the human body can reach. Sometimes the dancers all sprang into the air to a surprising height, and when they struck the ground again the calves of their widely spreading legs trembled so violently that the stripes of white clay looked like wriggling snakes, and a loud hissing filled the air." The love dances of the Australians are passed over in most of the accounts with a few suggestive references. They are hardly suitable for exhaustive descriptions. "I have seen dances," writes Hodgkinson, "which consist of the most repulsive of obscene motions that one can imagine, and, although I was alone in the darkness, and nobody observed my presence, I was ashamed to be a witness of such abomination." It will be sufficient to consider one dance of this sort—the *kaaro* of the Wachandi: "The festival begins with the first new moon after the yams are ripe, and is opened by the men with an eating and drinking bout; then a dance is executed in the moonlight around a pit which is surrounded with shrubbery. The pit and the shrubbery represent the female organ, which they are made to resemble, while the spears swung by the men represent the

male member. The men jump around, betraying their sexual excitement with the wildest and most passionate gestures, thrusting their spears into the pit." In this dance Scherer, the historian of literature, has discovered the "primitive germ of poetry." War and love are, as we have said, the chief motives stimulating the Australians to mimetic dances, but less suggestive scenes are also represented. Thus a canoe dance is performed in the north. For it the participants "paint themselves with white and red and carry sticks to represent paddles. The dancers arrange themselves in two ranks; each one holds the stick behind his back and moves his feet alternately with the rhythm of the song. At a signal all bring their sticks forward and swing them rhythmically back and forth like paddles, as if they were paddling in one of their light canoes. Finally, we may mention a mimetic dance that symbolizes death and the resurrection. Parker saw it when among the aborigines at Loddon. The performance was led by an old man who had learned the dance from the Northwestern tribes. "The dancers held boughs in their hands, with which they gently fanned themselves over the shoulders, and after they had danced for some time in rows and half circles they gradually collected into a close circular group. They then slowly sank to the ground, and, hiding their heads under the boughs, they represented the approach, and, in the perfectly motionless position in which they remained for some time, the condition of death. Then the old man gave the sign by abruptly beginning a new lively dance and wildly flourishing his bough over the resting group. All sprang up at once and fell into the joyous dance that was intended to signify the return to life of the soul after death."

No protracted research is needed to estimate the pleasure these gymnastic and mimetic performances afford to the performers and the spectators. There is no other artistic act which moves and excites all men like the dance. In it primitive men doubtless find the most intense æsthetic enjoyment of which they are generally capable. Most primitive dance movements are very energetic. We need only to go back to the years of our childhood to recollect the lively pleasure that was associated with such vigorous and rapid motions, provided that in

them a certain measure of duration and exertion was not exceeded. And this feeling was the stronger as the emotional tension relieved by them was more intense. To continue unmoved outwardly when inwardly disturbed is a great pain, and it is a delight to give vent to inner pressure by outer movements. We have seen, in fact, that occasion is given for dances among hunting tribes by any event that excites the mobile feelings of the primitive peoples. The Australian dances around the booty he has secured as the child hops around his Christmas tree.

Yet if the dance movements were only active the pleasure of energetic motion would soon give place to the unpleasant feeling of weariness. The æsthetic character of the dance lies less in the energy than in the order of the movements. We have pronounced rhythm the most important property of the dance, and have thereby only given expression to the peculiar feeling of primitive men, who observe before all else a strict rhythmical regulation of the movements in their dances. "It is astonishing," says Eyre in his description of Australian dances, "to see how perfectly the time is maintained, and how admirably exact is the coincidence of the motions of the dancers with the intonations of the music." And a similar impression has been made upon all who have observed the dances of the primitive men. This enjoyment of rhythm is without doubt deeply seated in the human organization. It is, however, an exaggeration to say that the rhythmical is always the natural form of our movements; however, a large portion of them, particularly those which serve in making a change of place, are executed naturally in rhythmical form. Further, every stronger emotional excitement, as Spencer has justly observed, tends to express itself in rhythmical movements of the body; and Gurney adds the pertinent remark that every emotional movement is in and of itself rhythmical. In this way the rhythm of the motions of the dance appears to be simply the natural form of the movements of locomotion sharply and powerfully exalted by the pressure of emotional excitement. The value of rhythm as a factor of pleasure is still not accounted for by this observation; although we can not make a definition avail as an explanation, we are compelled to receive it for the present as a finality. In

any case the pleasure is felt by primitive at least as strongly as by civilized peoples. The study of their poetry and music will supply us with further evidence.

So far it has not been necessary to distinguish between gymnastic and mimetic dances, for the pleasure in energetic and rhythmical movements is enjoyed in both kinds alike. The mimetic dances afford primitive man a further delight which he does not find in the gymnastic dances. They gratify his propensity for imitation, which sometimes appears to be developed into a real passion. The Bushmen take the greatest pleasure in "imitating with deceptive exactness the movements of particular men or animals;" "all the Australian aborigines have a surprising gift of mimicry," which they exercise on every occasion; and it is told of the Fuegians that "they repeat with perfect accuracy every word of a remark pleasing to them that is made in their presence, copying even the manner and the bearing of the speaker." In respect to this trait, a striking analogy exists between primitive peoples and the primitive individual, the child. The same passion for mimicry can be observed in our children, and in them, too, it is not unfrequently gratified in mimetic dances. The propensity to imitation is certainly a universal human property, but it does not prevail with the same force in all grades of development. In the lowest stages of culture it is almost irresistible in all members of society. But the more the differences between the several social members increase with the progress of civilization the less does its power become, and the most highly cultivated person strives above all to be like himself only. Consequently the mimetic dances which play so large a part among the primitive tribes are put further and further into the background, and have a place left for them only in the child world, where the primitive man is forever returning to live anew. The highest pleasure-giving value must doubtless be ascribed to those mimetic dances which represent the working of human passions—as, in the first rank, war dances and love dances; for while they, no less than the gymnastic and the other mimetic dances, satisfy the liking for active and rhythmic movements and the propensity to imitate, they afford besides that beneficent cleansing and freeing of the mind from the wild, turbulent

passions that vent themselves through them—that *katharsis* which Aristotle declared to be the highest and the best effect of tragedy. This last form of mimetic dance constitutes in fact the transition to the drama, which appears, from the point of view of development of history, as a differentiated form of the dance. When we seek to distinguish between the dance and the drama among primitive peoples, we have to depend on an external mark—the presence or absence of rhythm. But both are at the bottom identical in nature and effect at this stage of development.

Pleasure in vigorous and rhythmical motions, pleasure in imitation, pleasure in the discharge of violent emotions—these factors afford a satisfactory explanation of the passion with which primitive peoples cultivate the dancing art. The joys of the dance are of course most intensely and immediately experienced by the dancers themselves. But the delights which blaze in the actors stream out likewise over the spectators, and these have further an enjoyment which is denied the others. The dancer can not regard himself or his associates; he can not enjoy the view of the lusty, regular, alternating movements, singly and in mass, as the beholders do. He feels the dance, but does not see it; the spectator does not feel the dance, but sees it. On the other hand, the dancer is compensated by the knowledge that he is drawing the good will and admiration of his public toward himself. In this way both parties rise to a passionate excitement; they become intoxicated by the tones and movements; the enthusiasm rises higher and higher, and swells finally into a real madness, which not rarely breaks out with violence. When we contemplate the powerful effects which the primitive dances produce upon the actors as well as upon the spectators, we can understand without further inquiry why the dance has often acquired the significance of a religious ceremony. It is quite natural for the primitive man to suppose that the exercises which make so powerful an impression upon him can also exert a definite influence on the spiritual and demoniacal powers whose disposition controls his fate. So he executes dances in order to frighten away or to propitiate the ghosts and demons. Parker has described an Australian dance which was

intended to propitiate *Mindi*, a terrible demon, and secure his aid against the enemies of the tribe: "Rude images, one large figure and two small ones, carved out of bark and painted, were set up in a distant spot. The place was strictly tabooed. The men, and after them the women, decked in foliage and carrying a small rod with a tuft of feathers in their hands, danced up to the spot in a single, sharply curved line; and, having gone round it several times, they approached the principal figure and touched it timidly with their rods." A similar figure appeared in the religious dance observed by Eyre at Moorunde. "The dancers, who were painted and adorned as usual, wore tufts of cockatoo feathers on their heads. Some also carried sticks with similar tufts in their hands, while others held bunches of green foliage. After they had danced a while they withdrew, and when they appeared again they carried a curious rude figure which rose high in the air. It consisted of a bundle of grass and reeds wrapped in a kangaroo skin, the inner side of which was turned out and was painted all over with little white circles. A slender stick with a large tuft of feathers, which was intended to represent the head, projected from the upper end, and at the sides were two sticks with tufts of feathers coloured red, representing the hands. In front was a stick about six inches long, with a thick knot of grass at the end, around which was wrapped a piece of old cloth. This was painted white, and represented the navel. The whole figure was about eight feet long, and was evidently intended to represent a man. It was carried for a considerable time in the dance. Afterward two standards took its place, which were formed of poles and were borne by two persons. These, too, finally disappeared, and the dancers advanced with their spears." It is very probable that other primitive peoples have religious dances; but they have not yet been described. Even in Australia religious dances have been comparatively seldom observed. Gerland says, indeed, that "originally all dances were religious;" but he has not been able to prove this assertion. In fact, it has no support, so far as is known to us. There is nothing to require us to suppose that the Australian dances possessed originally any other meaning than the one they now suggest to an unprejudiced view. Only the smaller

number bear the character of religious ceremonies; the great majority aim only at æsthetic expression and the æsthetic stimulation of passionate emotional movements.

The purpose is not identical with the effect. While the purpose of most primitive dances is purely æsthetic, their effect extends widely and mightily beyond æsthetic limits. No other primitive art has so high a practical and cultural meaning as the dance. From the height of our civilization we are at first inclined to look for this meaning in the association of the sexes which the dance brings about. This is, indeed, the only social function that is left to the modern dance. But the primitive dance and the modern dance are so extremely different in their character that no conclusion whatever can be drawn from the one as to the other. The particular feature which has caused the modern dance to be favoured by both sexes—the close and familiar pairing of the male and the female dancers—is absent from most of the primitive dances. The dances of hunting peoples are usually executed by the men alone, while the women have only to care for the musical accompaniment. There are, however, dances in which men and women take part together, and these are for the most part undoubtedly calculated to excite sexual passion. We may further assert that even the male dances promote sexual association. A skilful and sturdy dancer will certainly not fail to make a profound impression upon the female spectators; and as a skilful and sturdy dancer is also a skilful and strong hunter and warrior, the dance may contribute in this way to sexual selection and to the improvement of the race. Yet, however great may be the significance of the primitive dance in this respect, it is still not great enough to justify by itself the assumption that no other primitive art exercises so important a cultural function as the dance.

The dances of the hunting peoples are, as a rule, mass dances. Generally the men of the tribe, not rarely the members of several tribes, join in the exercises, and the whole assemblage then moves according to one law in one time. All who have described the dances have referred again and again to this "wonderful" unison of the movements. In the heat of the dance the several participants are fused together as into a single being, which is

stirred and moved as by one feeling. During the dance they are in a condition of complete social unification, and the dancing group feels and acts like a single organism. *The social significance of the primitive dance lies precisely in this effect of social unification.* It brings and accustoms a number of men who, in their loose and precarious conditions of life, are driven irregularly hither and thither by different individual needs and desires to act under one impulse with one feeling for one object. It introduces order and connection, at least occasionally, into the rambling, fluctuating life of the hunting tribes. It is, besides wars, perhaps the only factor that makes their solidarity vitally perceptible to the adherents of a primitive tribe, and it is at the same time one of the best preparations for war, for the gymnastic dances correspond in more than one respect to our military exercises. It would be hard to overestimate the importance of the primitive dance in the culture development of mankind. All higher civilization is conditioned upon the uniformly ordered co-operation of individual social elements, and primitive men are trained to this co-operation by the dance.

The hunting tribes appear to have some perception of the socializing influence of their dances. In Australia the *corroborry* at least serves "as an assurance of peace between single tribes. Two tribes, desiring to confirm mutual good feeling, dance it together." On the Adaman Islands the tribes hold a market fair in connection with their joint dancing festivals. It is proper to remark, finally, in order to estimate the full influence of these intertribal festivals, that they are often of very considerable duration. Lumholtz tells, for example, of one that occupied six entire weeks.

The fact that the highest significance of the dance lies in its socializing influence accounts for its former power and its present decay. Even under the most favourable conditions only a somewhat limited number of persons can engage in a dance at once. We have seen that among the Australians and on the Andaman Islands men of several tribes dance together; but hunting tribes have only small poll lists. With the progress of culture and the improvement of the means of production the social groups increase; the small hordes grow into tribes, the members of which

are much too numerous for all to join in a common dance; and in this way the dance gradually loses its socializing function, and consequently loses also its importance. Among hunting peoples the dance is a public festival ceremony; among modern civilized nations it is either an empty theatrical spectacle on the stage, or, in the ballroom, a simple social enjoyment. The only social function left it is that of facilitating the mutual approach of the sexes, and even in this respect its value has become very questionable. We can, moreover, suppose that the primitive dance served as a medium for sexual selection toward the improvement of the race, as the most active and skilful hunter is also usually the most persistent and nimble dancer. But mental rather than bodily vigour prevails in our stage of civilization, and the heroes and heroines of the ballroom often enough play but a sorry part in sober life. The ballet of civilization, finally, with its repulsive sprawling attitudes and distorted perversions of Nature, may, to speak mildly, at best but satisfy vulgar curiosity. It can not be said that the dance has won in æsthetic what it has lost in social significance by the development of civilization. We have already pronounced upon the artistic value of our ballet, and the purely æsthetic enjoyment which our society dances as dances afford to the participants and to the spectators is hardly sufficient to account for their popularity. The modern dance presents itself to us in every respect as a vestigial organ which has become useless in consequence of changed conditions of life, and has therefore degenerated. Its former great function has been long since transferred to other arts. What the dance was for the social life of the hunting tribes, poetry is for civilized nations.—E. Grosse, *The Beginnings of Art*, 207–31. (Copyright, 1897, by D. Appleton & Co.)

PRIMITIVE DRAMA AND PANTOMIME

We have seen in the former chapters how intimately music and dancing are connected. Primitive dances have in the most cases a special meaning: they have to represent something and have therefore a position among the other arts quite different from the modern dances. At such representations no words are spoken, but mimicry and gestures are not less a language,

far better fitted to explain the action than the primitive language of words. These pantomimes, as we may call them, are indeed a primitive drama, and as music is always connected with dances one may judge how great the importance was that music had on these occasions. Dramatic music, or musical drama, if you like, is not an occasional union of two different arts, it is originally one organism, and at the same time the earliest manifestation of human art in general. Therefore, Richard Wagner's artistic genius again correctly defined the essential character of the drama when he said: "Long before the epic songs of Homer had become a matter of literary concern they had flourished among a people as actually represented works of art, supported by the voice and gesture, so to speak, as concentrated, fixed, lyric, dancing songs ("verdichtete, gefestigte, lyrische Gesangstänze"), in which the poets' fondness of resting with the description of the action and the repetiton of heroic dialogues prevailed." In one word, the historical order of all the branches of poetry does not begin with the epos—as frequently taught—but with the drama, lyric coming next, the epos lastly. This is the order the ethnologist can trace, this is at the same time the most simple and natural way in the development of poetry. The epos requires for all its psychological details so much polish of language, so much grammar and refined style to follow all the different shades of expression as to render very difficult our expecting this from very primitive people. For the dramatic representation mimicry and gestures are not only quite sufficient but the only effective means for explaining the action to an audience of different tribes, which sometimes do not understand their respective dialects and are accustomed to converse in gesture language.

Unfortunately Richard Wagner lost his advantageous position (just as in speaking of dance and music) when elaborating his intuitive idea. Then he called those dancing songs "a middleway station from the ancient lyric to the drama," although the pantomime cannot possibly be the very beginning of poetry and a middleway station at the same time. Wagner constantly overlooks the fact that the primitive drama is pantomime only, not poetry as well, no words being spoken in it. It is not until

later on that other arts, poetry among them, begin to show their genius, which they unfold and develop in the same proportion as they become independent and separate themselves from the common trunk. This done it would be contrary to all laws of development that the accomplished arts should once more form an organic union as they might have formed in their primitive state. Therefore, the attempt to unite the accomplished arts in equal rank to a single art work is theoretically a contradiction and practically an impossibility. The result of such an attempt was always that the composer either spoiled his art by a theoretical prejudice or practically acted contrary to his rules. Wagner's artistic genius was never in doubt for a single moment which way to go, and therefore his theory has remained an intolerable chaos, while his art has flourished in unrivalled splendour.

Thus we have reached the most recent phase of the drama before speaking a single word of the original pantomime, a proof how far-reaching and important it is to settle its character, of which we are now going to give a few examples.

The dances of the Damaras consist mostly of mimic representations of the movements of oxen and sheep. The dancers accompany their gesticulations by monotonous tunes, and keep time by clapping the hands and striking the ground with their feet. In the Ngumbi forest in Africa the gorilla is the object of mimic representations, during which an iron bell is rung and a hoarse rattle mingled with the other sounds. Then the measure grows quicker and quicker, a drum is beaten, sticks thundered on the log, until the whole hunting and rolling of the gorilla is performed with great truth to nature.

Among the Fans, who are cannibals, the dancers are fond of all sorts of mummery, in which a man disguises himself as any animal by putting on some cloth and mats, performing all kinds of grotesque movements amidst the jubilating shouts of his fellow-tribesmen. Such mummeries as occur on all the continents seem to be the origin of our masques, which are in great favour with savages and occur in very characteristic shapes. Thus the primitive animal pantomime is in some sense the original of our fancy-dress balls. Another kind of pantomimes

is that in which the dancers closely imitate all the movements they are accustomed to perform in a real war, as do the natives of Mahenge. These representations are evidently based on the principle of employing that overflow of vigour and energy which is necessary for the struggle of life (war, hunt, work), without, however, being in appropriate use for a time. Mr. Lander saw at Katunga a pantomimic performance in three acts. The first was a dance of twenty men wrapped up in sacks; the second represented the capture of a boa constrictor, which was imitated by one of the dancers as well as circumstances permitted it; the third, which caused the most laughter, was a caricature of the white man who was, however, very badly represented by a white-painted dancer. During the "entr'act," which was very short, there was a concert of drums and pipes and national songs of the women, whose choruses were joined by the whole people.

In Australia, too, there are pantomimic gestures connected with some songs which are passed on from performer to performer, as the song is carried from tribe to tribe. The aborigines of Victoria have their war dances before and after fights, dances appropriate to the occasion of "making young men," dances in which the women only take part, and dances in which the movements of the kangaroo, the emu, the frog, the butterfly are imitated. Mr. B. Smyth tells us that the perceptive faculties of the natives are very clear, and their power of observation and imitation sometimes quite extraordinary. Monotonous and harsh as their chants may be, the natives are by no means unsusceptible of the power of music. The young people readily learn how to sing and how to play on instruments. The natives at the Lake Albert imitate in their dances the actions and movements of a frog, the hunting of the emu, the voice of a bird.

The New Zealanders, too, invariably accompany their dances with gesticulations. Their most exciting dance is the war dance, performed before a battle commences with the purpose to excite their warriors to the highest pitch of fury. The dances of the ancient Tasmanians were imitations of animal movements.

The dance Hewa (in the South Sea Islands) is an accomplished pantomime in which the abduction of a girl or the birth

of a boy is represented. The Dyaks of Borneo have different kinds of dances representing the movements of animals, or a pantomime representing the hunting. All these dances are opened with music, to which excellent time is kept, and not seldom concluded in drunkenness. One of their pantomimes represented a sham fight in which one of the warriors was apparently killed, while the victor discovered too late that he had killed a friend, whereupon he showed unmistakable signs of regret and sorrow. Suddenly the slain warrior got up and began a frantic dance. Thus even in this state of culture there seems to be a general desire for the story to end well. The Papuans imitate in their dance the minstrelsy of birds, and always like to display some symmetry in their movements. Of two dancers standing next to each other, the one is always anxious to make the same movement with the right leg or arm which the other is performing with the left.

The dances of the Chukchi closely resemble those of the Indians. The men dance quite nude, having only the feet covered and the hair ornamented with feathers. Their movements consist of wild imitations of hunt and fight. The women sing to this and again imitate the movements of their own daily occupations, such as carrying water, collecting berries. Thus these dances become natural mimic ballets. The dancers of the Kamchadales are pantomimic, while the music to them is sung with always increasing passion. The rhythm is a system of six trochees (bachia-a). The fish-Tunguses have the same rhythm but without the division into strophes. With unvaried monotony it is repeated to perfect exhaustion. The Ostiaks on the Ob (main river of W. Siberia) have similar dances at their religious feasts, whence Mr. Swan concludes that a religious purpose must have formerly existed in the dances of the Kamchadales as well.

Besides these dances of the Kamchadales Mr. Langsdorf mentions the sea-dog dance and the bear dance, at which they go from the gentlest, softest motion of the head and shoulders to the most violent motions of the whole body. Mr. Lesseps mentions the partridge dance. Of course they are all accompanied with music, and it is almost painful to see with what

great exertion, especially of the lungs, they are carried on. Mr. Krebs saw similar dances on the Island of Spierken (Kurile group, south of Kamchatka, formerly belonging to Russia, since 1875 to Japan). The inhabitants are Ainus.

The dances and games of the Indians in California represent scenes of war, hunting, and private life. In the Rocky Mountains the natives have the calumet dance, lasting from two to three days and always performed with the expectation of receiving presents; another dance represents the discovering of the enemy; again, others are repeatedly described by travellers as the bear dance, beggar dance, bison dance, ox dance, sun dance. Speaking of the Sioux Indians Mr. Keating mentions the dog dance and the Chippewa scalp dance, of which the music is low and melancholic but not unpleasant. The performers stand in a circle each with the wing of a bird in his hand (origin of the fan?), with which he beats time on his gun, arrow, or something that would give a sound. The Indians in Guiana also have animal dances at which they keep up a monotonous chant, every dancer stamping the ground in strict time with the others. As they danced they uttered alternate cries which resembled the note of a certain bird often heard in the forests. Two pieces of wood, rudely carved, had to resemble the bird itself, others to represent infants.

It is no doubt a sign of further progress in those performances when the spoken word comes to the aid of the representation, and from this moment we may speak of the drama proper.

At Zleetun (or Zuletin, or Ziliten, or Sliten, North Africa) Mr. Lyon heard the negro women singing a national song in a chorus while pounding wheat, always in time with the music. One of the songs, sung by three girls, dealt with the return of the warriors, when suddenly they beat without measure and sang as if for one who was dead, endeavouring to comfort the girl who was supposed to have lost her lover. Then a goat was supposed to be killed and the entrails examined until a happy sign was discovered which indicated that the lost lover died nobly. They then resumed their pestles, winding up with a beautiful chorus. The master of the girls, however, forbade their singing any

more, saying it was unholy and displeasing to their Lord Mohammed, the Prophet of God.

The dramatic narratives of the negroes are on the whole remarkable. So true to nature is their action that they even indicate the space of time which elapsed between two events by producing a sound like *r-r-r-r*. In ancient Egypt there was, however, no public show which would resemble a theatre, nor pantomimic exhibitions nor scenic representation. The priests succeeded in forbidding this noblest and highest outcome of the human mind in order to use the mere rudiments of art for their own religious purposes. In consequence of the absence of a drama in Egypt, Mr. Wilkinson came to the conclusion that the stage was a purely Greek invention, and the pantomime a Roman. I think that the ethnological examples sufficiently prove a much earlier origin.

One of the most interesting forms of a primitive drama is the Australian corrobberree. The performers decorate themselves in some grotesque style, marking each rib by a broad stripe of white paint over the black skin, thus making the chorus look like a number of skeletons "endued with life by magic powers."

The festivities began by the dancers intoning a plaintive song, to which the old men and women joined in at times. The words to this were simply: "Junger a bia, mati, mati," which they always repeated. They commenced in a loud, shrill tone, gradually sinking in pitch and decreasing in force until the tones were so soft as to be scarcely distinguishable from a gentle breath of air that rustled in the bush. During the song the dancers remained in a bent position, and marked the time with their feet, lifting them from the ground in short movements. At the same time plucking the long ends of their beards, they suddenly changed the music to a loud "ha hei, ha hei," striking their spears and wameras against each other and stamping the ground vigorously with their feet. Then they got up with a sudden jerk, shouting a terrific "garra wai." Again they assumed the first motion, but in twice as quick time; now the whole row moved sideways up and down, shoulder on shoulder; now they danced in a circle, all with the same music and the same stamping of feet.

In another corrobberree, which Mr. Lumholtz saw, the music was performed by one man only, the others dancing in a chorus. A single woman was allowed to take part in dancing, which was considered a great honour to her. The music, in strict time with the movements, was quick and not very melancholy. The monotonous clattering, the hollow accompaniment of the women, the grunting of the male dancers and the heavy footfall of the men, reminded Mr. Lumholtz, especially when he was some distance away from the scene, of a steam engine at work. While all took great pleasure in the performance, the musician only apparently had no interest in what was going on, and, beating time, he sang with his hoarse tenor voice without looking up. He had already been watching the exercises for weeks, and knew them all by heart; but even he sometimes seemed to be amused. However primitive a corrobberree may appear to us, it is a well-prepared and elaborated dance, which it takes both time and practice to excel in.

Speaking of the tribes on Mary River or of the Bunja Bunja Country, Mr. Edward Curr mentions two kinds of corrobberree, the dramatic and the lyric. The intelligence that a new corrobberree had been composed was received with pleasurable excitement by the surrounding tribes. The poet having introduced his work to the neighbouring tribes, these in turn invited their allies to witness it and aid in the performance. In this manner a corrobberree travelled, and was sung with great enthusiasm where not a word of it was intelligible. The story of the drama appears to have been exceedingly short and simple, and rarely free from obscenity. Besides, there was an amazing simultaneousness of action, and excellent time was beaten by the women.

The corrobberree music—says Curr—is much like a chant. A string of words often runs to the one note. All the parts are variations of one tune, sung in different kinds of time, and at various rates of speed. There is a peculiar tendency to slide in semitones from one key into another, and the effect of the music is almost invariably minor. A favourite practice is to raise the pitch suddenly an octave, and in order to effect this it is sometimes necessary to allow it to slide to a low pitch before. Instead of intimating the conclusion of one part of the piece by two or

three yells, as the singers do at times, a more musical practice is often followed by trilling the sound of *r* at a high pitch.

The Kuri dance is another kind of primitive drama. Mr. Angas described one that was performed by five different classes of actors: 1. A body of about twenty-five young men, including five or six boys, the dancers. 2. Two groups of women, merely taking the part of supernumeraries, and beating time with their feet during the whole performance. 3. Two remarkable characters of the play. 4. A performer distinguished by a long spear. 5. Two singers—two elderly men in their usual habiliments.

The man in group four commenced a part which called forth unbounded applause; with his head and body inclined on one side, his spear and feathers behind his back, standing on the left leg, he beat time with the right foot, twitching his body and eyes, and stamping with the greatest precision; he remained a few minutes in this position, and then suddenly turned round, stood on his right leg, and did the same over with his left foot.

Mr. Bonwick heard at Port Jackson what he called a "speaking pantomime;" it dealt with the courtship between the sexes, and was performed with very expressive actions.

On Cook's second voyage Mr. Foster saw a "comic opera" on the Society Islands, the first act of which concluded with a burlesque beating of three of the participants. The performance of the Hurra, the festival dances on O-Waihi, called forth Mr. Chamisso's admiration. The singing of the dancers, accompanied by the drum, begins slowly and softly, gradually quickening and increasing, while the dancers proceed and play in a more lively manner. At Gresek in Java Mr. Tombe saw a Malayan comedy. "It was precisely what we call a Chinese shadow-play" and had to represent a war. The music to it consisted of kettle-drums, gom-goms, and the Javese violoncello, while the manager and thirty young dancing girls sang the praise of the emperor and his ancestors. Mrs. Ida Pfeiffer witnessed at Bandong the performance of a Javese pantomime in three movements, representing a fight, where the noisy and discordant music changed to a soft, plaintive melody as soon as one party was defeated. The whole performance was really pretty and expressive. The dan-

cers kept their eyes constantly fixed on the ground, as is customary among most non-European nations, to express profound respect for the spectators.

The most complete description of the Javese national drama is given by Mr. Raffles, who reports two different kinds of it, the "topeng" (characters represented by men), and the "wayang" (represented by "shadows"). In general the performers have only to "suit the action to the words," which are spoken by the "dalang," the manager of the entertainment. The gámelan accompanies the piece and varies in expression according to the nature of the action or the kind of emotion to be excited. The whole of the performance has more the character of a ballet than of a regular dramatic exhibition.

In Sumatra the custom prevails during their dances that a young lady ("gadis") sometimes rises and, with her back to the audience, begins a tender song which is soon answered by one of the "bujangs" in company. Professed story-tellers are sometimes raised on a little stage and attract the attention of the audience by buffoonery, or mimicry, and keep the company in laughter all night long. The young men frequent these assemblies in order to look out for wives, and Mr. Marsden remarks: "The lasses set themselves off to the best advantage." From this we may see how near the Javans come to European civilisation.

A savage opera of the more advanced kind is performed by the Khyongthas, wild tribes in South Eastern India. The performers, male and female, each had a cigar, which, at emotional passages, was stuck either behind the ear or through the pierced lobe thereof. The instruments were a "shawn" (a cross between the clarionet and the trumpet), "a battalion of drums" tuned up with screws in the most scientific style, and arranged in a circle in the middle of which the player was sitting. The opera, a happily ending love story, with a "primo corifeo tenore," a grumbling bass king, and a romantic soprano, was performed in the most exact style. Mr. Lewin really did like the music; it had distinct rhythm and time, while the choruses were sometimes very quaint and jolly. The drums, too, with their different and mellow tones were employed most judiciously, varying in expression and "tempo" to suit the dramatic action of the piece.

The climax of realism seems to be reached by the Chinese drama. Mr. Görtz tells us that one of his companions saw a performance where a woman actually tore out the heart of her female rival and ate it before the very eyes of the audience.

Speaking of the Aleutian Islanders (Indians) Mr. Choris mentions a pantomime in which a sportsman shoots a beautiful bird; it suddenly revives, however, into a beautiful woman with whom he at once falls in love. The ancient Nahua, which belong to some extent to the civilised nations of the Pacific States, always had great preparations for the public dances and dramas, with music, choirs and bands generally led and instructed in many rehearsals by a priest. When one set of dancers became tired another took its place, and so the dance continued through the whole day, each song taking about one hour. The drama scarcely equalled the choral dance, although in this respect, too, the Nahuas showed considerable advancement. The play generally had the character of a burlesque. The performers mostly wore masks of wood or were disguised as animals. Singers appeared on the stage, but no instrumental music is mentioned. The ancient writers unite in praising the perfect unison and good time observed by the singers both in solo and quartette, and they mention particularly the little boys of from four to eight years of age who rendered the soprano in a manner that reflected great credit on the training of their priestly tutors. Each temple, and many noblemen kept choirs and bands of professional musicians usually led by a priest, who composed odes appropriate to every occasion. The art of music was under royal protection, and singers as well as musicians were exempt from taxation; an academy of science and music was founded where the allied Kings of Mexico, Tezcuco, and Tlacopan presided and distributed prizes to the successful competitors.

The Indian singer often acts while he sings or dances, representing at the same time a certain scene from life. Sproat describes one of those dances, where a man appears with his arms tied behind his back with long cords, the ends of which are held by other natives, who drive him about. The spectators sing and beat time on their wooden dishes and bearskin drums. Suddenly the chief appears, and plunges his knife into the runner's

back. Another blow is given, a third one, until the blood flows down his back, and the victim falls prostrate and lifeless. Mr. Sproat adds he never saw acting more true to the life. And yet the blood was only a mixture of red gum, resin, oil and water, the same that was used in colouring the inside of canoes. In ancient Mexico and in Guatemala there were ballets at which rarely less than 400 people, but sometimes more than 2,000, performed. During the great feast of Toxcatl the music was supplied by a party of *unseen musicians,* who occupied one of the temple buildings. The Maya nations in Central America had dramatic performances under the leadership of one who was called "holpop," or master of ceremonies. Women were not allowed to take part in the mummeries, and the plays had a historical character with songs in the form of ballads founded upon local traditions and legendary tales.

Messrs. Spix and Martius tell us of a pantomimic scene of the Coroados in Brazil, which was a kind of lamentation, saying: "They had attempted to pluck a flower from a tree, but had fallen down." The scene is interpreted by the above authors as the loss of Paradise.

Of a peculiar character are the scenes in those theatres where the audience consists of white and black, where civilisation and originality each react in its own way on the impression of the drama. At Quito, Indians with their wives and babies, and negroes were admitted to the theatre, together with a party of ladies and gentlemen in evening dress. At the most important moments the audience, in its excitement, rose up and stood on the benches. In one of the tricks a pistol was fired, and then all the babies set up a squall simultaneously, so that the actors had to stop until the mothers could manage to hush the babies to sleep again. This is perhaps a counterpart to Mr. Schlagintweit's narrative of a representation in California, where the performance was interrupted by babies' cries, in consequence of which the male audience—there were very few females there at that time—commanded the *actors,* not the babies, to be silent.

It has often been asked why our dramatic performances frequently assume a tragic character, although we are at liberty to choose any other—perhaps more satisfactory—subject. A desire

for tragical events, however, seems to be deeply rooted in human nature, and always points to a freshness and originality of feeling which, not being entirely used up in every-day life, still press to the surface to unfold their full emotional vigour in the most precious and noblest part of our mental life—in our fancy. Only he, whose life itself is a mechanism or a tragedy, has no need for serious play of fancy. Savages do not yet seem to be in this state of mental decadence. Mr. Buchner once said: "Everywhere among the so-called savages we come across the custom to allow oneself to be shuddered at as a sort of devil." Among the women of the Maoris the desire for "fear and dread" —the two dramatical requirements of Aristotle—seem to be still more prevalent. Their chief amusement is the "tangi," or crying. The ladies do it in the most affecting way, tears are shed, hands are wrung, and the most heart-rending cries excite the sympathy of the company. Yet it is but a "mockery of woe." It is scarcely possible to express a strong psychological impulse in a more simple and natural way.—R. WALLASCHEK, *Primitive Music*, 214–29. (Longmans, Green and Co., 1893.)

[RELATION OF ART TO THE CONTROL OF LIFE]

ART AND INFORMATION

. . . . It is only natural that the requirements of practical life should call into existence various kinds of mimic, pictorial, or literary information which have little whatever to do with art, even if this notion is conceived in its widest sense. There is no reason for us to delay our argument by enumerating pantomimics, gestures, or paintings which aim at communicating notices of trivial importance, such as directions about the way to be taken by travellers, warnings with regard to dangerous passages, etc. Even as a purely technical product a work is of little interest as long as its subject is so poor and insignificant. We feel justified, therefore, in restricting our attention to such manifestations as present in their contents some degree of coherence and continuity.

The simplest examples of purely narrative art which fulfil the technical claims of a complete work will of course appear when the text of the narration consists of some real occurrence

which is represented with all its episodes and incidents. Primitive life affords many inducements to such relation. The men who have returned from war, or from a hunting or a fishing expedition, will thus often repeat their experiences in a dramatic dance performed before the women and children at home. Although in many cases there is reason to suppose that even these performances may be executed to satisfy some superstitious or religious motive, they have undoubtedly, to a certain extent, been prompted by the desire to revive and communicate the memories of eventful days. Other incidents that have made a strong impression upon the minds of the people are in the same way displayed in pantomimic action. It is sufficient here to refer to the elaborate dramas "Coming from Town" performed by Macusi children, in which all the episodes of a journey are reproduced with the utmost possible exactness, to the Corrobberrees in Queensland, in which incidents of individual or tribal interests, such as hunting or war adventures, but only those of recent occurrence, are enacted, and to the performance in a Wanyoro village, where M. de Bellefond's behaviour during a recent battle was closely imitated. At the dramatic entertainment held before some members of Captain Cook's expedition an elopement scene which had in reality taken place some time previously was performed in the presence of the runaway girl herself. The play is said to have made a very strong impression upon the poor girl, who could hardly refrain from tears when she saw her own escapade thus reproduced. The imitation of the real action was in this case evidently designed as punishment for the guilty spectator; and as the piece concluded with a scene representing the girl's return to her friends and the unfavorable reception she met with from them, it tended no doubt to exercise a salutary influence.

This naïve little interlude, with its satirical and moralising vein, naturally reminds us of those old farces which candidly defined themselves as adaptations of some "scandale du quartier."

Là elle fut exécutée
Icy vous est representée.

The wordless pantomimes and dramatic dances of the modern savages give us no information of this kind. But there is no doubt that a closer investigation would reveal that a great number

of the comical and heroical episodes which are described in ethnological literature have had their prototypes in some incidents of recent occurrence.

This opinion can only be corroborated by extending our investigation to the other departments of narrative art. Whatever other merits one might discover in primitive poetry, its strength does certainly not lie in invention. When the songs contain any narrative element at all, it refers to some simple experience of the day. Travel, hunting, and war afford the themes for the simplest epical poems as well as for the most primitive dramatic recitals. And any event of unusual occurrence will of course be made use of by the poets. Travellers who have learned to understand the languages of the natives they sojourn with have often observed that their own persons have been described in impromptu songs. Sometimes these songs have a satirical tendency; sometimes they are composed as glorifications of the white man. But there is no need to assume either of these tendencies in every case. The mere fact of his being a strange and new thing qualifies the European as a fitting subject for the primitive drama and poetry. And on the same grounds all the marvels of civilisation—the rifles, steamers and so on—will often be described in poetry. In the savage mind these unknown facts will easily give rise to the most marvellous interpretations. For an instance of such apparently fantastic products of poetic imagination, which in reality have their origin in an unavoidable misconstruction of an unknown reality, we need only refer to the description of Captain Cook's ships in the Hawaii song, which has been taken down by M. de Varigny. The ships themselves are spoken of as great islands, their masts are trees, the sailors are gods, who drink blood (*i. e.* claret), and eat fire and smoke through long tubes (*i. e.* pipes), and carry about things which they keep in holes in their flanks. It is but natural to assume that—if researches on the origins of the subjects were possible—the seeming richness of invention in many similar poems could be accounted for by the deficient observation and the faults of memory in uneducated man. And by such researches the importance of actual experience would be substantiated even with regard to the art of barbaric nations. As to the songs of the lower savages, to which we have to restrict

our attention at present, it is, as shown by the above adduced examples, unnecessary to appeal to this explanation.

Not less ephemeral than the literary subjects are the motives of primitive pictorial art. In Herr von den Steinen's account of the Xingu tribes we can find some most typical examples of such explanatory designs by which the poetic and dramatic recitals of battles, travels, etc., are supplemented. Owing to their fugitive character these simple manifestations can never be reduced to a scientific account. But there is reason to believe that in all parts of the world pictures have been drawn in the air or in the sand, of which there remain no more trace than of the gesture that is over or of the unwritten poem that is forgotten.

It is evident, however, that in some instances at least there have remained traces of these ephemeral narrations. The picture might have been drawn on some piece of bark or cloth instead of on the sand, the pantomime might have been repeated even after its subject had lost its actuality, or the text remembered after it had served its immediate purpose in the narration. The fugitive recital, whether pictorial, mimic, or oral, which lives only for the moment might in this way have become a permanent work, conveying the contents of the narrative to future times. One would think that as soon as such a means of preserving a record of past events had been, intentionally or accidentally, discovered, it would have immediately been turned to account. There is, after all, but one step between the impromptu dance or poem, which tells of a recent occurrence, and the work of art, which forwards the memory of the same occurrence to consecutive generations.

Ethnological science shows, however, that this distinction is by no means a theoretical one only. There are tribes amongst the lower savages in which the pantomimes and dances refer only to the most recent events. And if amongst these tribes some pictures or some dances have been preserved from older times, they appear to be quite isolated exceptions, the presence of which one is tempted to attribute to accident rather than design. It is only when we look to a higher degree of culture that we find a commemorative art, in the true sense of the word, appearing.

From the point of view of comparative psychology this fact is easily explained. The distance between an impromptu recital

of a recent occurrence and historical art and literature, as we understand them to-day, however short it may appear, covers perhaps the most momentous progress that man has made in his advancement towards culture. Whether commemorative art is to be considered as retrospective with regard to something that is past, the memory of which it endeavours to revive, or as directed towards future generations whom the artist would wish to make participators of the present, it presupposes a power of conferring attention upon matters the interest in which is not confined to the immediate present. No psychologist would include this faculty among the attributes of those in the lowest stage of mental development. Ethnological science, on the other hand, shows that it is as yet lacking in some of the existing tribes of the lower savages. In an æsthetic research it is of the highest importance to know exactly when and where this attribute appears. In the general history of art no date can be more significant than that which marks the commencement of a larger conception in the mind of the artist of the public for whom he works, bringing in its train, as it does, wider aims concerning his work.

HISTORICAL ART

. . . . Foremost in rank amongst all the works of design and sculpture that have influenced artistic evolution stand the likenesses of a deceased person which are placed by the relatives on his grave or in his home. To civilised man it is most natural to look upon these effigies as tokens of loving remembrance by which the survivors endeavour to keep fresh the memory of the departed. It is also easy for us to understand that the pious feelings extended towards such effigies may acquire an almost religious character. There is something to be said therefore on behalf of the view that commemorative monuments have been the predecessors of idols proper. Lubbock, who interprets Erman's description of the Ostyak religion in this way, quotes in further corroboration *The Wisdom of Solomon,* in which work there is to be found a detailed account of the evolution of idolatry from memorial images. The probability, however, is that in pictorial as well as in dramatic art the purely commemorative intention belongs to the latter stages of culture. It

seems in most cases to be beyond doubt that among the lowest tribes the images serve as paraphernalia in the animistic rites. They are either taken to be embodiments of the ancestors' soul, or receptacles in which this soul, if properly invoked, might take up its abode for the occasion. And similar superstitious notions are entertained, not only with regard to the monuments proper erected on the graves of powerful ancestors, but also with regard to such minor works as, *e. g.*, the dolls which are often prepared by West African mothers when they have lost a favourite child. The vague and indistinct character of these images shows us also that no intellectual record of the individual has been aimed at. No more than the poetic effusions of regret with which the pious survivors endeavour to propitiate the names of the deceased, do these formative works of "pietas" give us any information as to the personality of him whom they pretend to represent.

This general notion, however, must not be allowed to prevent us from admitting that among sundry tribes of mankind the images may be historical. This is asserted with regard to the Bongos by Schweinfurth, and with regard to the Gold Coast negroes by Cruickshank. The wooden effigies on the Marquesas Islands are described by Herr Schmeltz as "constructed in memory of celebrated members of the tribe." The Melanesian sculptures also, according to Codrington, are chiefly commemorative. It must be observed, however, that according to his own description a sort of religious respect is paid at least to some of them. More undeniably commemorative examples are to be found in New Zealand. Although no attempt to reproduce likenesses is made in these colossal wooden statues, they nevertheless more nearly approach the idea of monumental commemorative portraiture than any similar works of primitive art. The patterns of tattooing, that infallible means of identification amongst the Maoris, render it possible to preserve the memories of the individual ancestors through pictorial representation.

Not less problematic than ancestral sculptures are the much-debated rock-paintings and engravings that can be found in every part of the world. Herr Andree finds a sort of learned bias in the general tendency to look for some serious, sacred,

or historical meaning in every petroglyph. He points, very sensibly as it seems, to the prevailing impulse of the idle hand to scratch some figures, however meaningless, on every inviting and empty surface. Especially at much frequented localities—such as meeting-places, common thoroughfares, and places of rest for travellers—where the drawings of previous visitors call for imitation, this temptation must be looked upon as a very strong one. There is no reason for regarding the savage and the prehistoric man as devoid of an impulse, which, as we all know, shows its strength among the very lowest and most primitive layers of civilised society. It is unnecessary, therefore, to find anything more remarkable in the petroglyphs than is to be found in the familiar pictures on walls, trees, and rocks which have been wantonly decorated by the modern vandal. This common-sense explanation is undoubtedly sufficient to account for the origin of many much-debated works of glyphic art. But however sound within its proper limits it cannot be extended so as to give a general solution of the petroglyph problem. It is not likely, as Mr. Im Thurn observes, that pictures such as the rock-engravings in Guiana, to produce which must have cost so much time and trouble, should have their origin in mere caprice and idleness.

But even if the serious aspect of the petroglyphs is granted there still remains the difficulty of determining their special purpose. The historical explanation, although it would appear the most natural for us to adopt, is not to be taken unreservedly with regard to tribes on a low degree of development. What to us seems a sort of picture-writing might possibly serve a purpose anything but communicative. The so-called ideograms of the Nicobarese have, for example, according to Herr Svoboda, for their object the distraction of the attention of the malevolent demons from their houses and implements. When investigating the ritual, especially the funeral ceremonies, one meets with various specimens of similar ideography, the thought-conveying purpose of which is deceptive.

By the above examples the ambiguous character of primitive art-works has been proved almost *ad nauseam*. It appears that every single conclusion based upon isolated ethnological ex-

amples only is liable to be upset after a closer study of the facts. In order, therefore, to make any positive assertions as to the commemorative element in art we need some safer and more reliable grounds of argument than the inconsistent stories of travellers. We have, in other words, to investigate the social and psychological conditions which, in the respective cases, speak for or against the assumption of a commemorative impulse as a motive for art-production. Owing to our deficient knowledge of primitive life we are not able to rely upon these social and psychological data in every individual case. But we may nevertheless arrive at some broad results which in the main tally with, and corroborate the evidence afforded by, the majority of ethnological facts.

It is easy to understand why historical art holds no high place among the lower—that is, the hunting and fishing—tribes. Even if, as is the case in Australia, every unusual occurrence is represented in art with a view of keeping up its memory, these accidental interruptions in a monotonous life cannot possibly contribute to the development of an historical interest—that is to say, a commemorative attention in the people. When, on the other hand, we meet, in barbaric and semi-barbaric tribes, with a flourishing traditional art, we can also, in most cases, point to some peculiar features in their life which have called for commemoration. In a general survey of traditional poetry one cannot but be struck by the great prevalence of legends about migrations. As travels and incidents of travel were found to provide a favourite subject for the pantomimes and poems described in the preceding chapter, so these experiences have also exercised an important influence on the songs that have been preserved by oral tradition. And as we meet with numerous instances of improvised drama and poetry called forth by so eminently interesting an occurrence as the visit of some white people, so we can also trace the same theme in manifestations of historical art from dim and distorted narrations up to richly detailed descriptions like those of the Hawajian songs or of the Mangaian "Drama of Cook." The influence which these motives have exercised on the history of art is only in accordance with the universal laws of psychology. Tribal memory, no less

than individual memory, is dependent for its development on some favourable external influences that stimulate the attention.

It must not surprise us, therefore, that the varying experiences of war have everywhere acted as a strong incentive on the commemorative impulse. In this case, however, we have to count with a factor of still greater importance in the directly utilitarian advantage which military nations derive from historical art. Through recounting or representing the exploits of earlier generations, the descendants acquire that healthy feeling of pride which is the most important factor of success in all brutal forms of the struggle for life. So it has come about that historic art has everywhere reached its highest state of development amongst nations who have had to hold their own *vi et armis* against neighbouring tribes, or in the midst of which antagonistic families have fought for supremacy. The more the social institutions have been influenced by the customs of war, the more important is usually the part which commemoration plays in public life. It is highly prominent in semi-feudal Polynesia, where domestic warfare was at all times of regular occurrence; it has developed to some extent in warlike Fiji, notwithstanding the Melanesian indifference for the past; and it has obtained the position of a state function in military despotisms, such as the barbaric kingdoms of Central and South America and Western Africa. In isolated tribes, on the other hand, whose whole struggle has been one against nature, historical art is generally to be found at a very low ebb.

That bygone events have been preserved in history and art chiefly for the sake of their effect in enhancing the national pride can also be concluded from the way in which humiliating incidents are treated. There are, it is true, a few isolated and unhappy tribes which keep up some dim traditions of their inglorious past. Generally, however, defeats are totally ignored in the earliest chronicles. If, however, an unsuccessful battle should have provoked artistic manifestations, these aim at masking the humiliation. The ancient history of Greece affords the most curious examples of myths and inventions by means of which the popular imagination contrived to conceal disagreeable truths. The fate of Phrynichos, who was fined for having re-

vived the memory of the defeat at Miletus, shows that Greece, even at a much later period, preserved the same primitive ideas as to the *raison d'être* of historic art. It is needless to point out to how great an extent similar conceptions still prevail amongst all warlike nations, civilised and barbarous alike.

We must not overlook the fact, however, that defeats are often represented in unmasked form for the purpose of stirring up a revengeful spirit. But this apparent exception only proves the rule. By appealing to the wounded dignity of the people, poems and dramas of this kind serve the cravings of collective pride as effectively—although, no doubt, indirectly—as manifestations of the opposite order. An increased attention to the past, with a corresponding richness of traditional art, can also generally be found in nations where revenge is considered as a sacred duty bequeathed to descendants by their ancestors. . . . .

ART AND WORK

. . . . In the various tribes, with their differing types of life, there is afforded a singular opportunity of observing the connection between play, or art, and the serious occupations of life. The games of the children, as well as the dances and pantomimes of the full-grown, almost everywhere correspond to the prevailing activities in the various communities. The North American Indians, the Malays, the Maoris, the tribes of Central Asia, and others, all furnish instances of the familiar law that the amusements of warlike nations mainly consist in exercises which are preliminary to, or reminiscent of, the experiences of battle. A war dance or a mimic fight is the traditional type not only of their public entertainments, but also of their state ceremonial. No example could be more telling than that of the Dahomey state dances, which, however they may begin, always seem to end with an imitation of the greatest social action in the country —decapitation. Where the struggle for existence is a contest with nature and not with fellow-men, a hunting or fishing pantomime usually takes the place of these military performances. It is true that such representations of work often lose their importance in national art when the conditions of life grow easier. Mr. Taplin thus contrasts the rich and varied entertainments of the Polynesians, who without any exertion obtain their sub-

sistence from their bountiful soil, with the amusements of the poor Narrinyeri, who even in their dances and pantomimes have always practised "those arts which were necessary to get a living." But it is significant that even the inhabitants of these "happy islands" in their dramatic performances introduce imitations of rowing, fighting, and other kinds of common work. And at still higher degrees of development, where the division of labour has given rise to special trades, all these various crafts will often, as was the case in Dahomey, in ancient Peru, and in mediæval Europe, be a favourite subject for pantomimic representation. If such representations have been of no especial value as exercise, they may nevertheless, by bringing about an association between work and pleasure, have made toil and labour less repugnant. The exertions called forth by the struggle for existence have thus at all stages of culture, except that of modern industrialism, been to some extent facilitated by art.

Perhaps even more important in their influences than the imitation of work in play or drama are the artistic activities which accompany the actual performance of work. As these kinds of dance and song have been somewhat overlooked by Professor Groos, there is reason to make them the subject of a closer investigation.

When explaining the manifestations of art which can thus, in the literal meaning of the word, be called songs and dances of action, we have to divide our attention between two different points of view. First, the need of stimulation and regulation of the work of the individual, and, second, the need of co-operation in the work of different individuals. In both these respects art has had an importance among primitive tribes which can scarcely be overrated.

It is well known that at a lower degree of mental development the power of instantaneous muscular exertion is far less than among educated men. Broca's experiments showed that artisans with somewhat trained intelligence generally reached higher figures on a dynamometer than working men who were only used to bodily exertions. And the Negroes, whose forces were tested by Féré, were far below the average of Europeans. As in these experiments the natives were introduced to new and

unaccustomed movements, the evidence of the psychometric apparatus must be considered as somewhat extenuated by the circumstances. Broadly speaking, these experiments can, however, be taken as indications of a general psychological law. The experimental evidence is, moreover, corroborated by the common complaints of Europeans who have had to rely on natives. The slowness with which the primitive man gets into swing with his work has no doubt been referred to times without number by slavekeepers when advocating their methods of treating natives. Strange to say, there are some tribes which themselves candidly admit their own inertness, and voluntarily submit to whipping in order to get "their blood a little agitated."

The slowness and the insensibility of the Guarani are, however, as appears from Mr. Rengger's description, exceptional and pathological. But it seems as if almost all tribes had invented some means of inciting themselves to work. Only, these means are seldom such as Europeans would feel inclined to avail themselves of when urging on their workers. That they can nevertheless be as effectual as even the slavekeeper's whip is shown by Signor Salvado. His description of his experiences with Australian natives as farm-labourers is delightful: "How often," says he, "have I not used their dancing songs in order to encourage and urge them on in their work. I have seen them, not once, but a thousand times lying on the ground with minds and bodies wearied by their labour; yet as soon as they heard me singing the Machielò-Machielé, which is one of their commonest and favourite dancing songs, they would yield to an irresistible impulse, and rise and join me with their voices. They would even begin to dance joyfully and contentedly, especially when they saw me singing and dancing among them, like any other savage. After a few minutes of dancing I would seize the opportunity to cry out to them in a merry voice, Mingo! Mingo! a word meaning breast, which is also used in the same way as our word courage. After such an exhortation they would gradually set to work again. And they would begin afresh with such goodwill and eagerness, that it seemed as if the dance of Machielò had communicated to them new courage and new vigour."

From many parts of the world there may be quoted examples

of savages who always raise a chant when compelled to overcome their natural laziness. In many cases they seem, as in Salvado's anecdote, to avail themselves of words and melodies which perhaps were originally intended only for amusement. But it is also well known that working men everywhere stimulate themselves by special songs of exhortation. And when employed in prolonged and monotonous work they everywhere seem to know that toil may be relieved by song. The majority of these work poems may perhaps be of no great poetical or musical merit, but that does not affect their great evolutionistic importance. Whether Noiré is right or not in his theory that language has developed from the work cries of primitive men, there is no doubt that some of the simplest and perhaps earliest specimens of poetry are to be found among the short ditties sung by labourers during their work. The stimulus which is provided by such songs is easily understood without any explanation. But their invigorating power will be perceived more clearly when we take into account that emotional susceptibility to musical impressions which has been remarked in so many primitive tribes. Besides these invigorating effects, every musical accompaniment will also, by virtue of its rhythmic elements, regulate the movements of work, and thereby produce a saving of force deployed.

When the words of the work-songs refer to the action itself, the effect will be strengthened by verbal suggestion. It is true that many of the songs which are sung during the manufacture of weapons and utensils, during boat-building and such-like, are magical in their intention. But there is no doubt that the ideas of poetical magic are to a great extent derived from a psychological experience of the suggestive power of words. Without committing ourselves to any superstition, we can easily believe that—in Polynesia as well as in ancient Finland—canoes were better built when the "boat-building" song was properly recited by the builder. Only we prefer to think that the magic operated on the workman and not on his material.

The psychological influence of the work dances is still easier to understand. Preliminary movements, even when undirected, always make the subsequent action more effective; witness a golfer's flourish before driving. As Lagrange has pointed out,

their effect will be to develop that amount of animal heat which is necessary for every muscular contraction. When, moreover, they are fixed and differentiated in their form, the influence will of course be all the greater. By every attempt to execute a special movement, the idea of such movement is made more and more distinct. And as hereby the ideomotor force of this representation is increased, the final action must be executed with greater ease and greater efficacy. The validity of this law may be easily proved by experimental psychology. Féré has in his dynamometrical tests observed that the second pressure always attains a higher figure than the first one. "La première pression a pour effet de renforcer la représentation mentale du mouvement." Without any theoretical knowledge of these psychological facts, the common man has always been able to avail himself of the beneficial effects which are to be derived from preliminary imitations of any difficult movement. Hence the curious pantomimes of experimentation which we may always observe in the artisan who has to give a finishing touch to his work, or in the athlete who tries to perform a new and unaccustomed exercise.

The psychology of movement-perception, as we have described it in the foregoing, makes it evident that a similar prompting influence may be exercised by the actions of others. This is an experience which must have occurred, we should imagine, to every one who has been coached in golf by a professional. When concentrating his attention upon each successive movement in the instructor's model performance, the beginner in sports and gymnastics receives with his whole body, so to speak, an impression of the exercise he has to go through. The representation thus gains in distinctness as well as in motor force, and the subsequent movement is executed in an almost automatic way.

These familiar facts from the psychology of every-day life will explain why among the savage tribes we so often meet with the institution of the præsul. When any labour is to be performed which requires the co-operation of many hands, such as the harvest or rowing, the præsul demonstrates in dance or pantomime the sequence of movements which the others have to go through. By the suggestive influence of his performance all the individual workers are stimulated in their exertions. More

important, however, than this stimulation is the co-ordination of labour which is effected by the element of rhythm in song and dance.

We have in a previous chapter spoken at sufficient length of the incalculable æsthetic importance of rhythm as a means of producing emotional community between different individuals. In this connection we have still to point out that a fixed time-division must in the same way facilitate common activity. From the historical point of view this practical aspect is undoubtedly the more important. However fundamental and primordial the æsthetic function of the perception of rhythm may seem for the theorist, it is most probable that the development of this faculty has been chiefly furthered by its utilitarian advantages. There is no doubt that even the most primitive man may feel the want of associating his fellow-men in his emotions, and that for this purpose he may be able to give the impression of them a fixed rhythmical form. But the power of perceiving this time-division as a rhythm, and of obeying it closely in song and dance, would, as Dr. Wallaschek has shown, certainly not have attained so high a degree of development if this power had not, by facilitating common activity, been of such immense advantage for the maintenance of species. It goes without saying that any work which necessitates the co-operation of several workers must be executed with greater efficiency the more closely the individuals follow to a common rhythm.

There is no doubt, therefore, that, as Spencer remarks, the incompetence of the Arab and Nubian boatmen on the Nile is chiefly a result of their inability to act together. As an Arab dragoman is reported to have said, a few Europeans would, by virtue only of their superior powers of co-operation, do in a few minutes what now occupies hundreds of men. Such an incapacity for concerted action is, however, quite exceptional among the lower tribes of men. Some tribes, as *e. g.* the farmer Negroes in West Africa and the Malay and Polynesian boatmen, are even famous for the wonderful regularity of their work. This regularity, on the other hand, has been explained by all travellers as a result of the rhythmical songs by which their work is accompanied.

It is significant that the most typical specimens of working songs and dances should be met with in the tribes of Oceania. The insular life, which even in other respects has been so favourable to the development of art, has necessitated a most intimate co-operation between individuals. Hence the development of canoe dances and boating songs, by help of which the movements of the rowers are adjusted according to common and fixed rhythms. The same necessity has of course produced similar results, in a greater or less degree, in every community where the type of life makes collective action needful. It has not given rise to any important manifestations of art among the pastoral tribes, in which individuals can do well enough without help from each other. In agricultural societies, on the other hand, it has called forth those sowing and harvest dances or songs which are so familiar in the folklore of the civilised nations. And, more than any other of life's occupations, war has required an active coherence between the individual members of the tribe. The influence of military institutions on art is, however, in more than one respect so important that its treatment must be reserved for a special chapter.

ART AND WAR

. . . . We . . . . meet with highly developed choral dances in those nations in whose life war is a customary occurrence. The North American Indians, as well as the Dahomeyans, are noted for the soldier-like regularity of their dances. But nowhere among the lower tribes of mankind is the time-sense so refined as among the pre-eminently warlike Maori. Notwithstanding the furious movements in their war dances, the gesticulation of all the participants is always uniform and regular. According to Cruise the very slightest motions of their fingers are simultaneous; and, if we are to believe Mr. Bidwell, even their eyes all move together. Highly accomplished dancers as are certain other Polynesian tribes less warlike than the Maori, it will be admitted that such a pitch of more than Prussian precision would never have been attained if it were not for its military advantages. To the same cause one is also tempted to ascribe the regularity of the Kaffir dances, which by their choral character stand in so marked a contrast to the

amusements of the neighbour tribe, the peaceful Hottentots, among whom every dancer acts "separately for himself."

It is evident that a regular co-operation in fighting is effectually promoted by rhythmical music. And we do in fact find that music, especially instrumental music at the lower stages of development, is closely connected with war. It is, however, more natural to assume that military music, and similarly military poetry and dance, have had their chief importance not as regulating but as stimulating influences. There are many tribes which seem quite unable to observe any kind of military discipline. But even in the undeveloped and unmethodical warfare of the lowest savages, music, songs, and dances have been used as means of infusing courage and strength. The psychology of these military stimuli is of course the same as that of industrial art. But the general principles appear with far greater clearness when applied to this peculiar kind of activity.

First of all, the need of stimulation is never so great as when a man has to risk his life in an open battle. If in work he has to overcome his natural inertia, laziness, he has here to overcome the still stronger obstacle of fear. Contrary to the romantic notions of popular literature, primitive man seems to be timorous rather than brave when not encouraged by adventitious excitement. This cowardice can, however, to a great extent be explained by defective military organisation. Where the mutual support which the well-drilled soldiers of a regular army render each other is lacking, the need of personal courage is of course so much the greater. Civilised warfare tries to avoid the conflict between the instinct of self-preservation and of a soldier's duty by the pressure of strict discipline; savage warfare, which cannot count on the same forces of submission and mental control, is compelled to minimise this conflict by deadening the consciousness of peril. Hence the indispensability of some means of producing violent excitement by which the necessary forgetfulness of danger and death may be attained.

Apart from the influence of fear, the task of slaughter is one which, from its very nature, cannot be performed in cold blood. Even where the element of danger is absent, as when unarmed foes are killed or tortured, the savage executioners do not gener-

ally get to work straight away. As soon as a beginning has been made, a sort of intoxication will indeed be produced by mental as well as physical agencies, such as the sight of blood or the pride of conquest. But this intoxication, so eagerly desired by savages in civilised as well as in primitive communities, cannot be produced even in the lowest tribes of man without a preliminary working up. The passion of cruelty, like that of love, is, in its higher and more ecstatic forms, too overwhelming in its mental effects to be attained without an artificial enhancement of psychical capacity. But whereas the erotic feelings tend with growing development to become more and more a private matter, cruelty is among warlike tribes an emotion of national importance. The incitement to slaughter is therefore apt to become social—that is, common to several individuals at once. This is one of the reasons why war is of so much greater importance than love as a motive for tribal art.

There are some tribes in which the soldiers try to acquire courage and thirst for blood by magical expedients, such as smearing themselves with some powerful unguent, or eating the raw meat of a newly slaughtered ox. Sometimes a joint tattooing of the whole corps with a common pattern is undertaken, most probably for the same magical purpose. But however effectually such ceremonies may be supposed to operate, savages do not generally put so much trust in them as to give up their favourite means of stimulation—music and dancing. In people who sincerely believe in their own magic any rite will of course arouse increased confidence and courage. But this suggestive influence is only indirect in comparison with the immediate psychological effects of inciting dances.

Popular novels have familiarised us all with the wierd war dances which play such an important part in the warfare of the North American Indians. In its main features this type of pantomimic incitement is the same everywhere—among the African and Oceanic tribes as well as among the savage nations described in classic literature. By imitating the movements of a real fight, by exulting cries, deafening noise, and brandishing of weapons, the dancers work themselves up to a pitch of frenzy which cannot be compared to anything but a transient madness. Especially

among the nations of Africa war dances often arouse so much excitement, even when performed during times of perfect peace, that they become dangerous to friendly and peaceful onlookers. Here also—just as in the Hungarian "Enlistment"—dancing is used as a means of enticing men to join the ranks of the war chief who wants recruits for some war-expedition.

It is evident that the influence of such pantomimes is not restricted to a generalised stimulation and encouragement. These sham fights, just as the sportive imitations of work, must facilitate the execution of those movements which they imitate. And even those who do not join the dance will profit by watching the evolutions which they themselves will afterwards be called on to perform in reality. Thus there may originally have been a very utilitarian reason for the curious warfare of the Headhunters of Ceram, who always have the Jakalele dance performed in front of their fighting line. It is pathetic to read that even in their wars with the Dutchmen a few fantastically dressed dancers head the advance against the repeating guns of the European force.

This fact, which is certainly not without its parallels in other savage tribes, gives the most convincing proof of the indispensability of pantomimic stimulation to savage warfare. Although less intimately connected with fighting itself, poetry has had for war an importance which can scarcely be estimated at a much lower rate. Words, of course, can never provoke such a direct and almost physiological stimulation as the imitation of actions. But words, on the other hand, have a greater effect on the mind. The suggestive power of the war songs is also attested by the descriptions of travellers among various tribes. In Australia, for instance, four or five mischievously inclined old women can soon stir up forty or fifty men to any deed of blood by means of their chants, which are accompanied by tears and groans, until the men are worked into a perfect state of frenzy. "The savage blood of the Ahts always boiled when the war songs were recited, their fingers worked convulsively on the paddles, and their eyes gleamed ferociously; altogether they were two hundred murderous-looking villains." In Ashanti and in New Zealand—in short, amongst all the most warlike tribes—the military singers are able

to bring themselves and their audience up to a pitch of frenzy which is almost equal to that produced by the dances.

In one of the preceding chapters we have already pointed out how invaluable a support historic art has given to national pride. This feeling, on the other hand, is never so indispensable as in time of war. Wherever a tribe has any traditions of its past history, such traditions are always revived and recited to the soldiers before and during the battles. And if a people has no glorious ancestors to boast of, it can none the less gain the necessary confidence by glorifying its own valour and reviling its enemies. Even tribes like the Bakairis, for example, are thus able to "sing themselves full of courage" in boasting and defiant exultation.

According to competent observers, such songs are more particularly employed when the natives are afraid. The expression of bravery, even if originally affected, must necessarily awaken some real feeling of pride or confidence. Contempt, on the other hand, however laboriously worked up, is the most effectual means of preserving equanimity under the stress of depressing feelings, admiration, envy, or fear. Songs and pantomimes, such as, for instance, those with which the Polynesians invariably begin their battles, must therefore have a great power of emboldening the warriors. And while such outward shows of valour enable the performers to reconquer their courage, the enemy is intimidated by these manifestations of a feeling which is as yet incipient within themselves. In warfare, where the hostile armies stand within sight and hearing of each other, this consideration must of course be of extreme importance.

It seems, indeed, as if natural selection had developed in man an almost instinctive tendency to overcome fear by simulating the expressions proper to valour and menace. Just as animals, when frightened, make themselves bigger and more formidable to their enemies, whether from fear or anger we know not, so man tries to awaken fear in the enemy confronting him at the same time, and by the same means, as he vanquishes his own fear. This appears with especial clearness in wars between savage races, where both sides often seem to be as timid as they try to appear formidable and courageous. Their threats and

boastings are terrifying enough, but the real fights are very bloodless and free from danger. Among the Cammas "the words really seem to do more damage than the blows." The gallant game of bluff is in primitive politics not restricted to diplomatic negotiations; it plays an important part in the actual fighting. This remains true even with regard to tribes which are capable of real courage, not only in stealthy assault, but also in open battle. The Maorian military pantomimes afford the best example of such a manifestation, which not only stimulates the warriors to fight and regulates their movements in the battle, but also, as a European traveller has been compelled to admit, "strikes terror into the heart of any man." In this case the terrible effect is further strengthened by the hideous grimaces, rolling of the eyes, protruding of the tongue, and so on, with which the warriors accompany their dance. So important is this distortion of the countenance considered by the Maoris, that instruction in the art of grimacing forms a part in their military education. The most warlike of savage tribes thus does not despise the naïve expedient which constitutes almost the sole means of self-defence among peaceful Eskimos. And so highly do the Maoris appreciate the terrifying effects of the protruded tongue, that they carve the grimace upon their spears, the "hanis," evidently in the belief that such representations will—perhaps by some magic power —demoralise the enemy.

It thus appears that ornaments, painting, and sculpture have been of no small influence in enhancing the fighting powers of warlike nations. Among the lower tribes of man these arts are, however, on the whole much more appreciated as means of frightening the enemy. As was mentioned in a preceding chapter, some bodily deformations are, if we may believe the natives, undertaken solely for this purpose. Other warlike tribes endeavour to make themselves dreaded by their enemies by staining their bodies with ghastly colours, blood-red, azure, or black. Tatooing may, of course, often aim at the same end. And among the detached ornaments there is an especial class— for which the German ethnologists have invented the characteristic designation "Schreckschmuck"—which are only worn in order to make the appearance more frightful. The war helmets of

the Thlinkeets and the curious tooth masks of the Papuas are the most typical specimens of this pre-eminently warlike decoration. . . . .

ART AND MAGIC

. . . . To how great an extent works of art derive their material from old magical practices, the real meaning of which has gradually fallen into oblivion, may be shown in all the various departments of art. There is not a single form of imitation which has not been more or less influenced by this principle. Pantomimic representation, which for us is of value only in virtue of its intellectual or emotional expressiveness, was in lower stages of culture used as a magical expedient. Even a single gesture may, according to primitive notions, bring about effects corresponding to its import, and a complete drama is sincerely believed to cause the actual occurrence of the action which it represents. Students of folklore know that there is practically no limits to the effects which primitive man claims to produce by magical imitation. He draws the rain from heaven by representing in dance and drama the appropriate meteorological phenomena. He regulates the movements of the sun and encourages it in the labour of its wanderings by his dramatic sun-rituals; and he may even influence the change of the seasons by dramas in which he drives winter away and brings summer in. By those phallic rites to which we have already referred in the chapter on erotic art, he tries in the same way to act upon the great biological phenomena of human life. And again, when sickness is to be cured, he tries to subdue the demons of disease —to neutralise their action or to entice them out of the body of the patient—by imitating in pantomime the symptoms of the particular complaint. Finally, when the assistance of a divine power is required, the god himself may be conjured to take his abode in the body of the performer, who imitates what is believed to be his appearance, movements, and behaviour. Thus the belief in the effectual power of imitation has all over the world given rise to common dramatic motives as universal as the belief itself, and uniform as the chief requirements of mankind.

There are, no doubt, many instances of dramatic ritual the purpose of which is as yet a matter of discussion. With regard

to some of the symbolic dances representing hunting or fishing or the movements of game-animals, much may be said in favour of Mr. Farrer's view that the object of the pantomime is to make clearer to the deity a prayer regarding the things imitated. Similarly it is open to doubt whether the dramatic performances at initiation ceremonies, such as, for instance, the kangaroo dance described by Collins, are meant to impart instruction concerning the customs of the animals to the novitiates, or to confer upon them a magic power over the game. In the therapeutic practices of primitive tribes we may find still more puzzling points of controversy. The sucking cure, for instance, by which the medicine-man pretends to extract from the patient the cause of his illness in the form of some small object—a pebble, a tuft of hair, or the like—may be, as Professor Tylor thinks, a mere "knavish trick." But it is also possible, we believe, that, at least, originally, it may have been performed as a *bona fide* magic, based upon the notion of the efficacy of vehicles and symbolic action. The method of restoring sick people and sick cattle to health by pulling them through a narrow opening, for instance, in a tree, which has been explained by most authors as a case of magical transference by contact—*i. e.* transference of the disease from the patient and of the vital power represented by the tree to him—ought, according to the brilliant hypothesis of Professor Nyrop, to be considered as a magically symbolic representation of regeneration.

While leaving undecided all these subtile questions, each of which would require a chapter of its own in order to be definitely treated, we have only to maintain the great probability which stands on the side of the dramatic interpretation. However fantastic the belief in a magical connection between similar things may appear at the outset, a continued ethnological study must needs convince every one of its incalculable importance in the life of primitive man. And such a conviction can only become confirmed by an examination of the influence which this superstition has exercised on the formative arts.

The belief in picture magic is evinced by its negative as well as by its positive results. All over the world we meet with the fear of being depicted. In so far as this superstition has given

rise to a prohibition of painting and sculpture, it has thus seriously arrested the development of art. But, on the other hand, the same notion has commonly called forth pictorial representation, the aim of which is to gain a power over the things and beings represented. Most frequent, perhaps, of all these specimens of magical art are the volts, *i. e.* those dolls and drawings used for bewitching, which are spoken of as early as in the ancient Chaldean incantations, which are used by the majority of savage tribes, and which may incidentally be found even now among the European nations. But owing to their necessarily clandestine character these charms have never exercised any important influence on the pictorial art. More important, from the historical point of view, than these black and cryptic arts is the white magic by which social benefits are pursued. Just as the principal forms of magical drama correspond to the chief requirements of mankind, so the most important magical sculptures and paintings are found in connection with agricultural rites, the observances of hunting and fishing, medical practices, and ceremonies for removing sterility. And in the same way as dramatic representation, but with far greater efficacy, pictorial representation has been able to satisfy the highest material as well as spiritual requirement by bringing the deity in concrete relation with man through the sympathetic force of the image. The art of conjuring a spirit to take its abode in what is believed to be a counterfeit of its corresponding body has thus given rise to the fashioning of idols and the subsequent adoring of them. Although essentially the same as in the simple medical cures and the practices of sorcery, pictorial magic has in these cases of idol-making exercised a more far-reaching and thorough influence on mankind than in any of its other manifestations. . . . .

From the point of view of the civilised observer the above-quoted examples of dramatic, pictorial, and poetic magic may seem to have an obvious and ready explanation. A work of art always gives to the spectator, and no doubt also to the creator, an illusion of reality. As, moreover, primitive man is notoriously unable to distinguish between subjective and objective reality, it seems natural to assume that it is the mental illusion created by his work which makes the magician believe that he has acquired

a power over the things represented by it. And this assumption is all the more tempting because even to civilised, enlightened man there is something magical in the momentary satisfaction which art affords to all our unfulfilled longings by its semblance of reality. Strong desire always creates for itself an imaginary gratification which easily leads the uncritical mind to a belief in the power of will over the external world. The whole of art-creation may thus be looked upon as an embodiment of the greatest wishes of mankind, which have sought the most convincing appearance of their fulfilment in the form and shape of objective works. What is in us a conscious and intentional self-deception, may be in the unsophisticated man a real illusion. The main psychological aspects of the activity could not be changed by these different subjective attitudes on the part of the producer. The essential point is that in both cases the greatest possible resemblance to the original would be sought for in order to increase in the one case the magical efficacy of the work, in the other the pleasure to be derived from the illusion. The belief in a magical connection between similar things would thus exercise an incalculable influence on the growth of realism in art. But, unfortunately, this easy explanation is not corroborated by an impartial examination of the lower stages of art-development. The statement of M. Guaita as to the volt, *Plus la ressemblance est complète plus le maléfice a chance de réussir,* does not appear to be borne out by the evidence. The only instance we know of in which greater or less resemblance to the model is thought of as bearing on the magical efficacy of a painting is that of the East Indian artists. We are told that it was in order to evade the Mohammedan prohibition of painting that they resorted to that style of treating nature, bordering on caricature, which is so characteristic of, say, Javanese art. Similarly it is by an appeal to their virtue of non-resemblance that artists among the Laos defend their pictures as being harmless and innocent. But such references to barbaric or semi-barbaric art do not tell us much about the conditions prevailing at the beginning of art-development. The primitive man who avails himself of dolls and drawings in order to bewitch is generally quite indifferent to the life-like character of his magical instruments. The typical

volt gives only a crude outline of the human body, and, which is most remarkable, it does not display any likeness to the man who is to be bewitched. As a rule the same vagueness can also be noticed in the paintings and sculptures which serve the aims of medical cure and religious cultus. With due allowance for the deficient technical ability and the naïve suggestibility of primitive man, it seems hard to believe that illusion could have been either intended or effected by the rude works of pictorial magic. Thus it becomes doubtful whether the belief in the magical power of painting and sculpture can have been based upon a confusion between subjective and objective reality.

This doubt can only be increased when we see how little confidence primitive men themselves put in the mere likeness as such. When M. Rochas produced his modern imitations of the volt, he was always anxious to have his wax dolls sufficiently saturated by contact with the person over whom they were intended to give him power. And in this he closely followed the methods of the native sorcerers, who generally tried to increase the efficiency of their magical instruments by attaching to them such objects as nail-cuttings, locks of hair, or pieces of cloth belonging to the man to be bewitched. In the making of idols we can often observe the same principle. The statue itself is not sacred by virtue of its form; it acquires divine power only by being put in *material* connection with the deity. The most obvious example is that of the West African Negroes, who, when they wish to transplant the wood deity from his original home to their towns and villages, build up a wooden doll of branches taken from the tree in which he lives. The god is certainly supposed to feel a special temptation to take up his abode in the idol made in his own likeness; but it is evident that the material link established by the choice of the wood is thought of as being of no less, perhaps even of greater, importance than the resemblance. The same close and inseparable combination of magic by connection and magic by similarity meets us in the ancestor statues of New Guinea, which contain the skull of the dead in hollows inside their head. And although the procedure is more indirect, the underlying thought is nevertheless the same in the curious practices found, *e. g.*, on the island of Nias. The spirit of the

deceased is here conducted to his statue by means of some small animal which has been found in the neighbourhood of his grave. In none of these examples—which might be supplemented by analogous instances from various tribes—do we see any hint of that manner of regarding statues and paintings which prevails among civilised men. While with us the mental impression on the spectator constitutes, so to speak, the object and the essential purport of the work of art, the magicians and the idolaters seem to look chiefly for material power and influence in their simulacra.

The way in which pictorial art is used for curative purposes affords us—if further proofs are wanted—a still more telling example of the difference between the magical and the æsthetic points of view. Nothing could be more crude and primitive than the notions held by the Navajo with regard to the salutary influences of their famous sand-paintings. The cure is effected, they believe, not by the patient's looking at the represented figures, but by his rolling himself on them, or having the pigments of the mosaic applied to the corresponding parts of his own body. The more of the sacred sand he can thus attach to his body, the more complete is his recovery. Among other tribes at the same stage of development as the Navajos the prevailing views are almost equally materialistic. And even among the barbaric and semi-civilised peoples, although we do not meet with quite as gross superstitions, the fundamental idea of pictorial magic appears often to be the same. The power of a painting or a sculpture is thought of as something which is quite independent of its mental effects upon the spectator. That interpretation of sympathetic magic, therefore, which to us seemed most natural, cannot possibly be applied to its lower forms.

As the concepts by which primitive man justifies to himself his beliefs and practices are naturally vague and hazy, it may seem futile to attempt to reconstruct his reasoning. Nothing final or definite can be asserted on so obscure a topic. But we may legitimately discuss the most consistent and most probable way in which to account for the various forms of sympathetic magic. And with regard to this question of probabilities we may rely to some extent upon the illustrative and suggestive analogies to primitive thought which can be found in scientific philosophies.

For it is evident that a philosophical doctrine, if it fits in with the facts of primitive superstition, may be explanatory of those vague and latent notions which, without logical justification or systematical arrangement, lie in the mind of the magician and the idolater. Such a doctrine is presented to us in the familiar emanation-theories, according to which every image of a thing constitutes a concrete part of that thing itself. According to the clear and systematic statement of this doctrine given by the old Epicurean philosophers, shadows, reflections in a mirror, visions, and even mental representations of distant objects, are all caused by thin membranes, which continually detach themselves from the surface of all bodies and move onward in all directions through space. If there are such things as necessary misconceptions, this is certainly one. Such general facts of sensuous experience as reflection, shadow, and mirage will naturally appear as the result of a purely material decortication—as in a transfer picture. How near at hand this theory may lie even to the modern mind appears from the curious fact that such a man as Balzac fell back upon it when attempting to explain the newly-invented daguerreotype, that most marvellous of all image-phenomena.

To the primitive mind it is only natural to apply this reasoning even to artificial images. Whether the likeness of a thing is fashioned by nature in water or air, or whether it be made by man, it is in both cases thought of as depriving the thing itself of some part of its substance. Such a notion, which cannot surprise us when met with among the lower savages, seems to have been at the bottom of even the Mohammedan prohibition of the formative arts. It is evident that, wherever images are explained in this crude manner, magic by similarity in reality becomes merely a case of magic by contiguity.

The materialistic thought which lies behind the belief in a solidarity between similar things appears nowhere so clearly as within the department of pictorial magic. But we believe that its influence can also be traced in all the other superstitions regarding sympathetic causation. In spite of that feeling of superiority so common in nations which have no leaning towards formative arts, poetical and musical magic in its lower forms is

founded on quite as crude a conception as any idolatry or pictorial sorcery. It would indeed be unnatural if the theory of corporeal emanations had not been applied to acoustic as well as to optical phenomena. To the unscientific mind sounds and reverberations are something quite synonymous with sights and reflections. The sounds connected with the impression of a being, thing, or phenomenon will therefore be conceived as being a part of the being, thing, or phenomenon itself. To these easily-explained notions there are to be added the peculiar superstitions entertained with regard to a class of sounds which are only associated with things, viz. their names. To the primitive man a name literally constitutes a part of the object it denotes. The magician may therefore get the mastery over the spirits he invokes and the men he bewitches by merely mentioning their names. In many cases a most potent spell consists of unintelligible words, which to the conjurer himself has no meaning at all. In other cases, although the words really have a sense, we can easily observe that they are not used for the purpose of creating an illusion of reality. The typical incantation may indeed in a manner be called descriptive. The singer is anxious not to pass by any detail, the omitting of which may be injurious to the potency of his magic. But the result is only a sort of inventory, which seldom suggests a full and vivid mental picture. Many of the Shaman prayers and songs show us by their whole character that in their case at least poetical illusion has had nothing to do with the belief in the power of words over things.

Thus, according to the magical-world view, a system of material connections links together in close solidarity things and their images, sounds, or names. But this network of connections may even, we believe, extend further, so as to bring into its chain of causation qualities and actions, in short, abstract notions, which cannot be considered as material objects possessing material parts. Just as an image which presents the figure and shape of a given thing is conceived as a part of that thing itself, so all things which have distinctive qualities in common may be thought of as being parts of a common whole. As a fantastic but still natural product of the primitive mind, there may thus appear the idea of an invisible connection, which binds

together all things similar and draws them to each other. Vaguely and dimly even savages may have been able to anticipate in some measure those imposing thoughts which received an organised and consistent statement in the doctrine of universal ideas. But to primitive man these "ideas" must appear as concrete objects and beings, exercising their influence on phenomena in a quite material manner.

To those who are familiar with that peculiar combination of spiritual conceptions of the world and material conceptions of the spirit which makes up the primitive cosmology, this explanation will not appear far-fetched or strained. But it is to be admitted that in many cases it may be difficult, or even impossible, to lay one's finger on the elements of magic by contiguity which lie at the root of a given instance of imitative witchcraft. No doubt the mental effects produced by the imitation on its creator and spectators will in many cases contribute to the belief in its power. In the more artistic forms of poetic magic the suggestive power of the words replaces the brute force of their sound. And in dramatic magic an illusion, whether intended or unintended, must necessarily affect the performers as well as their audience. Therefore, however the psychological basis of magic may be explained, it cannot be denied that in some of its developments magic has become closely connected with art. The self-deceit by which we enjoy in art the confusion between real and unreal is indeed, by its intentional character, distinct from the illusion to which primitive man is led, more perhaps by his deficient powers of observation than by any strength of imaginative faculty. But still there exists a kinship, and that belief in an overlapping of the tangible and intangible life which is fostered by magic in the lower art affords, as it were, a premonition of the effects produced by imagination in the higher.—Yrjö Hirn, *The Origins of Art,* 157–63, 173–81, 250–60, 261–72, 283–97 (Macmillan, 1900).

The papers on "Indian Mythologies" and "The Medicine-Man and the Occupations," in Part II, and Frazer's paper on magic in Part VI are closely related to art.

While I have classed "myth," in Part VI, along with religion, the mythology of a people may equally be considered as artistic material. No systematic study of myth from the standpoint of art has been made. Some materials for such a study will be found in the bibliography of Part VI.

The interesting results presented by Holmes on the origin of form in the plastic arts should be followed up in other papers by the same writer indicated in the bibliography, and in Haddon's *Evolution in Art.* Ornamental and decorative art have the advantage of being profuse, visible, and relatively permanent, corresponding somewhat to our written records, and the eminent Swedish student Stolpe reached the view that "one real key to a scientific treatment of ethnographic objects is found in the comparative study of ornamental art."

Art has also an element in common with religion. Both religion and art are characterized by high states of emotion, resulting in change of habit. In religion this is called conversion, and is conspicuously associated with the generation of a fund of emotion through large assemblies of people and the operation of mass suggestion. In the same connection the student should consider the periodic assemblies of primitive societies, particularly the orgiastic practices and states of mind there developed, as leading to later artistic representation. Consult the bibliographies of Parts VI and VII.

1. Andree, R. *Ethnographische Parallelen und Vergleiche,* "Das Zeichnen bei den Naturvölkern," 56–73; "Spiele," 86–106; "Masken," 107–65.

*2 Angell, J. R., and Thompson, H. B. "A Study of the Relations between Certain Organic Processes and Consciousness," *Psych. Rev.,* 6: 32–69.

[Important for the psychology of art.]

3 Aston, W. G. "An Ancient Japanese Classic," *Asiat. Soc. of Japan, Trans.,* 3, Pt. 2: 109–17.

4 Avelot, R. "La musique chez les Pahouins," *L'anth.,* 16: 287–93.

5 Baker, W. B. "On Maori Popular Poetry," *Ethn. Soc. Trans.,* N. S., 1: 44–59.

*6 Balfour, H. *The Evolution of Decorative Art.* New York, 1893.

7 Balfour, H. "The *Goura,* a Stringed-Wind Musical Instrument of the Bushmen and Hottentots," *Jour. Anth. Inst.,* 32: 156–76.

8 Balfour, H. "The Friction Drum," *Jour. Anth. Inst.,* 37: 67–92.

*9 Balfour, H. *The Natural History of the Musical Bow.* Oxford, 1899.

9*a* Barrett, S. A. "Pomo Indian Basketry," *Univ. of Cal. Pub. in Am. Arch. and Ethn.,* 7: 134–265.

10 Barton, F. R. "Children's Games in British New Guinea," *Jour. Anth. Inst.,* 38: 259–79.

*11 Boas, F. "The Decorative Art of the Indians of the N. W. Pacific-Coast," *Am. Mus. Nat. Hist., Bul.,* 9: 123–76.

*12 Boas, F. "The Use of Masks and Head Ornaments on the North-West Coast of America," *Internationales Archiv für Ethnog.,* 3: 7–15.

*13 Boas, F. "Facial Paintings of the Indians of Northern British Columbia," *Am. Mus. Nat. Hist., Mem.,* 2: 13–24.

14 Boas, F. "Chinook Songs," *Jour. Am. Folk-Lore,* 3: 220–26.

14*a* Boas, F. "The Houses of the Kwakiutl Indians," *U. S. Nat. Mus., Proc.,* 1888: 197–213.

15 Bourke, J. G. *The Snake-Dance of the Moquis of Arizona.* New York, 1884.

16 Brass, M. "Beiträge zur Kenntniss der künstlichen Schädelverbildungen," *Verein für Erdkunde, Mitth.*, 1886: 131–80.

*16*a* Brigham, W. T. "Hawaiian Feather Work," *Bernice Pauahi Bishop Mus., Mem.*, 1:1–81.

*16*b* Brigham, W. T. "Mat and Basket Weaving of the Ancient Hawaiians," *Bernice Pauahi Bishop Mus., Mem.*, 2:1–105.

*16*c* Brigham, W. T. "The Ancient Hawaiian House," *Bernice Pauahi Bishop Mus., Mem.*, 2:1–194.

*17 Brinton, D. G. *Essays of an Americanist*, "The Conception of Love in Some American Languages," 410–32.

18 Brinton, D. G. "Native American Stringed Musical Instruments," *Am. Antiq.*, 19:19, 20.

18*a* Brinton, D. G. *Ancient Nahuatl Poetry.* Philadelphia, 1899.

*19 Bücher, K. *Arbeit und Rhythmus.* Leipzig, 1902.

[Valuable, but attaches too much importance to the origin of poetry in labor songs.]

20 Buckland, A. W. "On Tattooing," *Jour. Anth. Inst.*, 17:318–27.

21 Capus, G. "La musique chez les Khirghizes et les Sartes de l'Asie centrale," *Rev. d'ethnog.*, 3:97–119.

21*a* Carr, L. *Dress and Ornaments of Certain American Indians.* Worcester, 1897.

22 Chamberlain, B. H. "Basho and the Japanese Poetical Epigram," *Asiat. Soc. of Japan, Trans.*, 30:243–362.

23 Chamberlain, B. H. "On the Use of 'Pillow Words' and Plays upon Words in Japanese Poetry," *Asiat. Soc. of Japan, Trans.*, 5, Pt. 1:79–88.

24 Culin, S. "Chess and Playing-Cards," *U. S. Nat. Mus., Rep.* for 1896:679–972.

25 Culin, S. "Chinese Games with Dice and Dominoes," *U. S. Nat. Mus., Rep.* for 1893:489–537.

*26 Culin, S. "Games of the North American Indians," *Bur. Am. Ethn., Rep.*, 24:3–809.

27 Culin, S. "American Indian Games," *Am. Anth.*, N. S., 5:58–64.

*28 Culin, S. *Korean Games, with Notes on the Corresponding Games of China and Japan.* Philadelphia, 1895.

29 Culin, S. "Hawaiian Games," *Am. Anth.*, N. S., 1:201–47.

*30 Cushing, F. H. "A Study of Pueblo Pottery as Illustrative of Zuñi Culture-Growth," *Bur. Am. Ethn., Rep.*, 4:473–521.

31 DALE, W. H. "On Masks, Labrets, and Certain Aboriginal Customs," *Bur. Am. Ethn., Rep.*, 3:67–202.

31*a* DAMES, M. L. *Popular Poetry of the Baloches.* L., 1907. (*Folk-Lore Society Pub.*, 59.)

32 DENSMORE, F. "The Music of the Filipinos," *Am. Anth.*, N. S., 8:611–32.

*33 DEWEY, J. "The Theory of Emotion," *Psych. Rev.*, 1:553–69; 2:13–32.

[Best papers on emotion.]

*34 DIMITROFF, Z. *Die Geringschätzung des menschlichen Lebens, und ihre Ursache bei den Naturvölkern.* Leipzig, 1891.

35 DIXON, R. B. "Basketry Designs of the Indians of Northern California," *Am. Mus. Nat. Hist., Bul.*, 17:1–32

36 DORSEY, G. A. "An Arikara Story-Telling Contest," *Am. Anth.*, N. S., 6:240–43.

*37 DORSEY, J. O. "Omaha Sociology," *Bur. Am. Ethn., Rep.*, 3:334–55. [Amusements.]

38 DORSEY, J. O. "Omaha Clothing and Personal Ornaments," *Am. Anth.*, 3:71–78.

39 DZIEDUSZYCKI, A. *Das Gemüt: Eine Erörterung der Grundlagen der Aesthetik.* Wien, 1905.

40 ELLIS H. "The Psychology of Red," *Pop. Sci. Monthly*, 57:365–75; 517–26.

41 EMERSON, E. R. *Masks, Heads and Faces.* London, 1892.

*42 EMMONS, G. T. "The Chilkat Blanket," *Am. Mus. Nat. Hist., Mem.*, 3:329–400.

42*a* EMMONS, G. T. "The Basketry of the Tlingit," *Am. Mus. Nat. Hist., Mem.*, 3:229–77.

43 EPHRAIM, H. *Ueber die Entwickelung der Webetechnik and ihre Verbreitung ausserhalb Europas.* Leipzig, 1905.

44 FARRAND, L. "Basketry Designs of the Salish Indians," *Am. Mus. Nat. Hist., Mem.*, 2:391–400.

45 FERREE, B. "The Element of Terror in Primitive Art," *Am. Antiq.*, 11:332–48.

46 FEWKES, J. W. "Archaeological Expedition to Arizona in 1895," *Bur. Am. Ethn., Rep.*, 17:517–744.

*47 FEWKES, J. W. "The Feather Symbol in Ancient Hopi Designs," *Am. Anth.*, 11:1–14.

*49 Fillmore, J. C. "The Harmonic Structure of Indian Music," *Am. Anth.*, N. S., 1:297–318.

*50 Fillmore, J. C. "Primitive Scales and Rhythms," *Internat. Cong. of Anth., Mem.*, 158–75.

51 Fisher, K. *Ueber die Entstehung und die Entwicklungsformen des Witzes.* Heidelberg, 1871.

*52 Fite, W. "Art, Industry and Science: A Suggestion toward a Psychological Definition of Art," *Psych. Rev.*, 8:128–44.

*53 Fletcher, Alice C. *Indian Story and Song from North America.* Boston, 1900.

54 Fletcher, A. C. "Indian Songs and Music," *Jour. Am. Folk-Lore*, 11:85–104.

55 Fletcher, A. C. "Love Songs of the Omaha Indians," *Internat. Cong. of Anth., Mem.*, 153–57.

*56 Fletcher, A. C. "A Study of Omaha Indian Music" (with a report on the "Structural Peculiarities of the Music," by J. C. Fillmore), *Peabody Mus., Arch. and Ethn. Papers*, 1, No. 5·1–77.

57 Folnesics, J. "Die Anfänge des Schmuckes," *K. K. Oesterreichisches Mus. für Kunst und Industrie, Mitth.*, N. F., 11:45–56.

58 Fowke, G. "Stone Art," *Bur. Am. Ethn., Rep.*, 13:47–178.

58*a* Foy, W. "Tanzobjekte vom Bismarck Archipel, Nissan und Buka," *Dresden K. Ethnog. Mus., Pub.*, 13, vii+40 pp.

59 Friederici, G. "Der Tränengruss der Indianer," *Globus*, 89:30–34.

*60 Frobenius, L. "Die bildende Kunst der Afrikaner," *Anth. Gesellsch. in Wien, Mitth.*, 27:1–17.

61 Garnier, H. C., and Amman, A. *L'habitation humaine.* Paris, 1892.

62 Gatschet, A. S. "Songs of the Modoc Indians," *Am. Anth.*, 7: 26–31.

63 Gilmore, B. J. "Zuñi Melodies," *Jour. Am. Ethn. and Arch.*, 1: 63–91.

64 Goblet d'Alviella, E. *The Migration of Symbols.* Westminster, 1894.

65 Gomme, A. B. *The Traditional Games of England, Scotland, and Ireland.* . . . . London, 1898.

65*a* Gomme, G. L. "Labour Songs and Cries," *The Antiq.*, 12:145–49.

66 Greifswald, G. J. "Das Beduinenleben im Lichte der Beduinenpoesie," *Globus*, 64:353–56; 375–78.

67 GRINNELL, G. B. "The Lodges of the Blackfoot," *Am. Anth.*, N. S., 3:650–68.

68 GRINNELL, G. B. "Notes on Some Cheyenne Songs," *Am. Anth.*, N. S., 5:312–22.

*69 GROOS, K. *The Play of Animals.* (Tr. by E. L. Baldwin.) New York, 1908.

*70 GROOS, K. *The Play of Man.* (Tr. by E. L. Baldwin.) New York, 1901.

*71 GROSSE, E. *The Beginnings of Art.* (Translation.) New York, 1897.

[The best general popular description of primitive art.]

72 GROSSE, E. "Ethnologie und Aesthetik," *Viertelsjahrssch. für wiss. Philos.*, 15:392–417.

73 HAAST, J. VON. "Ancient Rock Paintings in New Zealand," *Jour. Anth. Inst.*, 8: 50–61.

74 HADDON, A. C. "Decorative Art of British New Guinea," *Roy. Irish Acad., Cunningham Mem.*, No. 10.

*75 HADDON, A. C. *Evolution in Art.* New York, 1895.

[The best work on decorative art.]

76 HADDON, E. B. "The Dog-Motive in Bornean Art," *Jour. Anth. Inst.*, 35:113–25.

77 HADDON, A. C. "The Secular and Ceremonial Dances of Torres Straits," *Internat. Archiv f. Ethnog.*, 6:131–62.

78 HADDON, A. C. "Notes on Children's Games in British New Guinea," *Jour. Anth. Inst.*, 38:289–97.

79 HAGEN, K. *Ueber die Musik einiger Naturvölker (Australier, Melanesier, Polynesier).* Hamburg, 1892.

80 HALES, H. "Prehistoric New Mexican Pottery," *Smithsonian Inst., Rep.* for 1892:535–54.

82 HAMILTON, A. *The Art of Workmanship of the Maori Race of New Zealand.* Dunedin, 1900.

*82*a* HAULLEVILLE, A. DE, ET COART. "Les beaux-arts chez les Congolais," *Ann. du Musée du Congo*, 3 sér., 1:5–136.

*82*b* HAULLEVILLE, A. DE, ET COART. "La céramique chez les Congolais," *Ann. du Musée du Congo*, 3 sér., 2:1–194.

83 HEARN, L. "Three Popular [Japanese] Ballads," *Asiat. Soc. of Japan, Trans.*, 22:285–336.

*84 HEIN, W. "Die Verwendung der Menschengestalt in Flechtwerken," *Anth. Gesellsch. in Wien, Mitth.*, 21:45–56.

*84*a* Hein, A. R. *Malerei und technische Künste bei den Dayaks.* Vienna, 1889.

*84*b* Hein, A. R. *Die bildenden Künste bei den Dayaks auf Borneo.* Vienna, 1890.

*85 Hein, W. *Zur Entwickelungsgeschichte des Ornamentes bei den Dajaks.* Vienna, 1895.

86 Henshaw, H. W. "Animal Carvings from the Mounds of the Mississippi Valley," *Bur. Am. Ethn., Rep.,* 2:117–66.

87 Hervey, D. F. A. "Malay Games," *Jour. Anth. Inst.,* 33:284–94.

88 Hildebrandt, P. *Das Spielzeug im Leben des Kindes.* Berlin, 1904.

*89 Hirn, Y. *Origins of Art, a Psychological and Sociological Inquiry.* London, 1900.

[The best attempt at psychological interpretation.]

90 Hodson, T. C. "The 'Genna' amongst the Tribes of Assam," *Jour. Anth. Inst.,* 36:92–103.

*91 Hoffman, W. J. "The Graphic Art of the Eskimos," *U. S. Nat. Mus., Rep.* for 1895:739–968.

*92 Holden, E. S. "Studies in Central Am. Picture Writing," *Bur. Am. Ethn., Rep.,* 1:205–45.

92*a* Holmes, H. "Notes on the Toys and Games of Elemt, Papuan Gulf," *Jour. Anth. Inst.,* 38:280–88.

93 Holmes, W. H. "Evolution of the Aesthetic," *Am. Assoc. for Adv. of Sci., Proc.,* 41:239–55.

*94 Holmes, W. H. "On the Evolution of Ornament," *Am. Anth.,* 3:137–46.

*95 Holmes, W. H. "Studies in Aboriginal Decorative Art," *Am. Anth.,* 5:67–72; 149–52.

*96 Holmes, W. H. "On the Evolution of Ornament—An American Lesson," *Am. Anth.,* 3:137–46.

*97 Holmes, W. H. "Ancient Art of the Province of Chiriqui, Colombia," *Bur. Am. Ethn., Rep.,* 6:3–187.

*97*a* Holmes, W. H. "Archaeological Studies among the Ancient Cities of Mexico," *Field Mus. Pub., Anth. Ser.,* 1:1–338.

[First class on Mexican architecture.]

*98 Holmes, W. H. "Pottery of the Ancient Pueblos," *Bur. Am. Ethn., Rep.,* 4:257–360.

*99 Holmes, W. H. "Ancient Pottery of the Mississippi Valley," *Bur. Am. Ethn., Rep.,* 4:361–436.

*100 Holmes, W. H. "Aboriginal Pottery of the Eastern United States," *Bur. Am. Ethn., Rep.*, 20:1–201.

*101 Holmes, W. H. "Prehistoric Textile Fabrics of the United States Derived from Impressions on Pottery," *Bur. Am. Ethn., Rep.*, 3: 393–425.

*102 Holmes, W. H. "The Use of Textiles in Pottery Making and Embellishment," *Am. Anth.*, N. S., 3: 397–403.

*103 Holmes, W. H. "A Study of the Textile Art in Its Relation to the Development of Form and Ornament," *Bur. Am. Ethn., Rep.*, 6: 189–252.

*104 Holmes, W. H. "Prehistoric Textile Art of the Eastern United States," *Bur. Am. Ethn., Rep.*, 13:3–46.

*105 Holmes, W. H. "Art in Shell of the Ancient Americans," *Bur. Am. Ethn., Rep.*, 2:179–305.

106 Hose, C., and Shelford, R. "Materials for a Study of Tatu in Borneo." *Jour. Anth. Inst.*, 36:60–91.

107 Howitt, A. W. "Notes on Songs and Songmakers of Some Australian Tribes," *Jour. Anth. Inst.*, 16:327–35.

108 Ihering, H. von. "Die künstliche Deformirung der Zähne," *Zeits. f. Ethn.*, 14:213–62.

109 Jayne, C. *String-Figures.* New York, 1906.

109*a* Kandt, R. "Gewerbe in Ruanda," *Zeits. f. Ethn.*, 36:329–72.

110 Karutz, Dr. "Zur westafrikanischen Maskenkunde," *Globus*, 79: 361–68.

111 Koch-Grünberg, T. *Anfänge der Kunst im Urwald.* Berlin, 1906.

111*a* Koch-Grünberg, T. *Südamerikanische Felszeichnungen.* Berlin, 1907.

112 Krämer, A. "Die Ornamentik der Kleidmatten und der Tatamerung auf den Marshallinseln . . . . ," *Archiv f. Anth.*, 30:1–28.

113 Kraeplin, E. "Zur Psychologie des Komischens," *Wundt's Psych. Studien*, 2:128–61; 327–62.

*114 Kroeber, A. L. "Decorative Symbolism of the Arapaho," *Am. Anth.*, N. S., 3:308–36.

115 Kroeber, A. L. "Basket Designs of the Indians of Northwestern California," *Univ. of Cal. Pub. in Am. Arch. and Ethn.*, 2:105–64.

116 Kuske, B. "Der Stand der Ornamentikfrage," *Globus*, 82:149–55.

117 Lasch, R. "Der Selbstmord aus erotischen Motiven bei den primitiven Völkern," *Zeits. f. Socialwissenschaft*, 2: 578–85.

*118 LAUFER, B. "Decorative Art of the Amur Tribes," *Am. Mus. Nat. Hist., Mem.*, 7:1–79.

*118a LEHMAN, J. "Systematik und geographische Verbreitung der Geflechtsarten," *Dresden K. Zool. u. Anth. Ethn. Mus., Abhandl.*, 11:No. 3, 1–34.

[Contains titles on technique of basketry and weaving.]

119 LEUSCHNER, F. "Negerkunst im deutschen Togogebiet," *Globus*, 61:53–57.

120 LINDSAY, T., AND KANO, J. "Jiujutsu," *Asiat. Soc. of Japan, Trans.*, 16:192–206.

121 LIPPERT, J. *Kulturgeschichte der Menschheit*, "Fortschritte des Schmuckes und der Kleidung und ihr socialer Einfluss," 1:364–444; "Die Genussmittel engeren Sinnes in ihrer kulturgeschichtlichen Bedeutung," 1:619–32.

*122 LUMHOLTZ, C. "Symbolism of the Huichol Indians," *Am. Mus. Nat. Hist., Mem.*, 2:1–228.

*123 LUMHOLTZ, C. "Decorative Art of the Huichol Indians," *Am. Mus. Nat. Hist., Mem.*, 3:281–327.

*124 LUSCHAN, F. v. "Ueber Buschmann-Malereien in den Drakensbergen," *Zeits. f. Ethn.*, 40:665–85.

124a LUSCHAN, F. v. *Die Karl Knorrsche Sammlung von Benin-Altertümern. . . .* Stuttgart, 1901.

125 MACCAULEY, C. "Single Songs of a Hundred Poets," *Asiat. Soc. of Japan, Trans.*, 27, Pt. 4:1–155.

*126 MCGUIRE, J. D. "The Development of Sculpture," *Am. Anth.*, 7:358–66.

127 MCGUIRE, J. D. "Pipes and Smoking Customs of the American Aborigines," *U. S. Nat. Mus., Rep.* for 1897:361–645.

128 MAN, E. H. "On the Use of Narcotics by the Nicobar Islanders and Certain Deformations Connected Therewith," *Jour. Anth. Inst.*, 23:232–40.

129 MARCH, H. C. "Polynesian Ornament and Mythography, or a Symbolism of Origin and Descent," *Jour. Anth. Inst.*, 22:307–33.

*130 MASON, O. T. "Aboriginal American Basketry," *U. S. Nat. Mus., Ann. Rep.* for 1902:171–584. (Reprinted by Doubleday, Page & Co., in two volumes.)

131 MATHEW, J. "The Cave Paintings of Australia," *Jour. Anth. Inst.*, 23:42–52.

132 MATHEWS, R. H. "Australian Ground and Tree Drawings," *Am. Anth.*, 9:33–49.

133 MATHEWS, R. H. "The Rock Paintings and Carvings of the Australian Aborigines," *Jour. Anth. Inst.*, 25:145–63; 27:532–41.

*134 MATTHEWS, W. "The Earth Lodge in Art," *Am. Anth.*, N. S., 4: 1–12.

135 MATTHEWS, W. "Navajo Gambling Songs," *Am. Anth.*, 2:19.

136 MATTHEWS, W. "Navajo Silversmiths," *Bur. Am. Ethn., Rep.*, 2: 167–78.

137 MATTHEWS, W. "Navajo Weavers," *Bur. Am. Ethn., Rep.*, 3: 371–91.

137*a* MEYER, A. B. "Masken von Neu Guinea und dem Bismarck Archipel," *Dresden K. Ethnog. Mus., Pub.*, 7:1–14.

137*b* MEYER, A. B., UND PARKINSON, R. "Schnitzereien und Masken vom Bismarck Archipel und Neu Guinea," *Dresden K. Ethnog. Mus., Pub.*, 10:1–28.

137*c* MEYER, A. B., UND RICHTER, O. "Ornamentik von Celebes," *Dresden K. Ethnog. Mus., Pub.*, 14:1–140.

†137*d* MYERS, C. S. "The Ethnological Study of Music," in *Anthropological Essays Presented to E. B. Tylor*, 235–53.

†138 MINDELEFF, C. "Navaho Houses," *Bur. Am. Ethn., Rep.*, 17:475–517.

139 MINDELEFF, C. "Aboriginal Architecture in the United States," *Jour. Am. Geog. Soc.*, 30:414–27.

†140 MINDELEFF, V. "A Study of Pueblo Architecture, Tusayan and Cibola," *Bur. Am. Ethn., Rep.*, 8:13–228.

†141 MORGAN, L. H. *The League of the Iroquois*, "Dances—Games," 249–304.

142 NORDENSKIÖLD, G. *The Cliff-Dwellers of the Mesa Verde, Southwestern Colorado: Their Pottery and Implements.* (Tr. by D. L. Morgan.) Chicago, 1893.

142*a* PLEYTE, C. M. *Indonesian Art: Selected Specimens. . . .* The Hague, 1901 ff.

143 POWELL, J. W. "Esthetology, or the Science of Activities Designed to Give Pleasure," *Bur. Am. Ethn., Rep.*, 19:lv-xcii; *Am. Anth.*, N. S., 1:1–40.

144 POWELL, J. W. "Stone Art in America," *Am. Anth.*, 8:1–7.

145 PREUSS, K. T. "Phallische Fruchtbarkeitsdämonen als Träger des mexikanischen Dramas," *Arch. f. Anth.*, N. F., 29:129–88.

*146 Preuss, K. T. "Der Ursprung der Religion und Kunst," *Globus*, 85:321–25; 86:321–27; 355–63; 388–92; 87:333–37; 347–50; 380–84; 394–400; 413–19.

147 Putnam, F. W. "Conventionalism in Ancient American Art," *Essex Inst., Bul.*, 1886.

*148 Ratzel, F. *History of Mankind*, "Dress, Weapons and Implements of the Polynesians and Micronesians," 1:195–214; "Dress, Weapons, and Other Property of the Malays," 1:405–36.

149 Reed, V. Z. "The Ute Bear Dance," *Am. Anth.*, 9:237–44.

150 Regnault, F. "Essai sur les débuts de l'art ornamental géométrique chez les peuples primitifs," *Soc. d'Anth. de Paris, Bul.*, 4 Sér., 7:532–49.

*151 Reinach, S. "La sculpture en Europe avant les influences gréco-romaines," *L'anthropologie*, 5:15–34; 173–86; 288–305; 6:8–39; 293–311; 549–63; 662–74; 7:168–94.

152 Rink, H., and Boas, F. "Eskimo Tales and Songs," *Jour. Am. Folk-Lore*, 2:123–31.

153 Rivière, E. "The Engraved Pictures of the Grotto of La Mouthe, Dordogne, France," *Smithsonian Inst., Rep.* for 1901:439–49.

155 Roth, H. L. "Maori Tatu and Moko," *Jour. Anth. Inst.*, 31:29–64.

[This and 156 are good papers on tattooing.]

156 Roth, H. L. "Tatu in the Society Islands," *Jour. Anth. Inst.*, 35:283–94.

157 Roth, H. L. "Mocassins and Their Quill Work," *Jour. Anth. Inst.*, 38:47–57.

*157*a* Roth, W. E. *Ethnological Studies among the N. W. C. Queensland Aborigines*, 108–31. [Ornament, games, etc.]

*157*b* Roth, W. E. "Domestic Implements, Arts and Manufactures," *North Queensland Ethnology*, Bul. 7.

158 Satow, E. "The Korean Potters in Satsuma," *Asiat. Soc. of Japan, Trans.*, 6, Pt. 2:193–203.

159 Schellong, O. "Musik und Tanz der Papuas," *Globus*, 56:81–87.

*159*a* Schmidt, M. "Ableitung südamerikanischer Geflechtmuster aus der Technik des Flechtens," *Zeits. f. Ethn.*, 36:490–512.

[Schmidt's book, *Indianer-Studien in Zentralbrasilien*, contains valuable materials on textiles and suggestions on the theory of ornament.]

160 Shufeldt, R. W. "A Navajo Artist and His Notions of Mechanical Drawing," *Smithsonian Inst., Rep.* for 1886:240–44.

161 Schurtz, H. *Die Philosophie der Tracht.* Cotta, 1891.

162 Schurtz, H. "Zur Ornamentik der Aino," *Internat. Archiv f. Ethnog.*, 9:233–51.

162*a* Schweinfurth, G. *Artes Africanae.* London, 1875.

163 Simmel, G. "Psychologische und ethnologische Studien über Musik," *Zeits. f. Völkerpsych. und Sprachwissenschaft*, 13:261–305.

164 Sinclair, A. T. "Tattooing—Oriental and Gypsy," *Am. Anth.*, N. S., 10:361–86.

*165 Skeat and Blagden. *Pagan Races of the Malay Peninsula*, "Decorative Art," 1:395–493; "Habitations," 1:168–99; "Dress," 1:137–67; "Music, Songs, and Feasts," 2:117–72.

166 Spencer, H. *Psychology*, "The Aesthetic Sentiments," 2:627–48.

*167 Spencer and Gillen. *The Native Tribes of Central Australia*, "Clothing, Weapons, Implements, Decorative Art," 567–636.

*168 Spencer and Gillen. *The Northern Tribes of Central Australia*, "Welcoming Dance," 569–79; "Clothing and Ornament," 683–95; "Decorative Art," 696–744.

*168*a* Steinen, K. v. d. "Prähistorische Zeichen und Ornamente," *Festschrift für Adolph. Bastian*, 249–88.

*168*b* Stephan, E. *Südseekunst, Beiträge zur Kunst des Bismarck-Archipels und zur Urgeschichte der Kunst überhaupt.* Berlin, 1907.

*169 Stevenson, M. C. "Zuñi Games," *Am. Anth.*, N. S., 5:478–97.

*169*a* Stokes, J. F. G. "Hawaiian Nets and Netting," *Bernice Pauahi Bishop Mus., Mem.*, 2:105–62.

*170 Stolpe, H. "Entwickelungserscheinungen in der Ornamentik der Naturvölker," *Anth. Gesellsch. in Wien, Mitth.*, 22:19–62.

171 Stratz, C. H. *Die Frauenkleidung und ihre natürliche Entwickelung.* Stuttgart, 1904.

172 Thurm, E. F. Im. "Games of the Red-Man of Guiana," *Folk-Lore*, 12:132–61.

*173 Tylor, E. B. "On the Geographical Distribution of Games," *Jour. Anth. Inst.*, 9:23–29.

*174 Veblen, T. "The Instinct of Workmanship and the Irksomeness of Labor," *Am. Jour. Sociol.*, 4:187–201.

*175 Wallaschek, R. *Primitive Music.* London, 1893.
[The best book on the subject.]

*176 Westermarck, E. "The Magic Origin of Moorish Designs," *Jour. Anth. Inst.*, 34:211–22.

*176*a* WILKE, A. G. "Zur Enstehung der Spiraldekoration," *Zeits. f. Ethn.*, 38:1–33.

*177 WILSON, T. "Prehistoric Art," *U. S. Nat. Mus., Rep.* for 1896: 349–664.

[Valuable. Numerous illustrations.]

*178 WISSLER, C. "Decorative Art of the Sioux Indians," *Am. Mus. Nat. Hist., Bul.*, 18, Pt. 3:231–78.

179 WITTE, F., UND SCHMIDT, W. "Lieder und Gesänge der Ewhe-Neger, Ge-Dialekt," *Anthropos*, 1:194–209.

180 WOERMANN, K. *Geschichte der Kunst aller Zeiten und Völker.* Leipzig, 1900.

181 WOODRUFF, C. E. "Dances of the Hupa Indians," *Am. Anth.*, 5: 53–61.

*182 WUNDT, W. *Völkerpsychologie*, "Die Phantasie in der Kunst," 2: Pt. 1, 87–526.

183 WRAY, L. "The Malayan Pottery of Perak," *Jour. Anth. Inst.*, 33: 24–35.

PART VI
MAGIC, RELIGION, MYTH

MAGIC, RELIGION, MYTH

SYMPATHETIC MAGIC

A savage hardly conceives the distinction commonly drawn by more advanced peoples between the natural and the supernatural. To him the world is to a great extent worked by supernatural agents, that is, by personal beings acting on impulses and motives like his own, liable like him to be moved by appeals to their pity, their hopes, and their fears. In a world so conceived he sees no limit to his power of influencing the course of nature to his own advantage. Prayers, promises, or threats may secure him fine weather and an abundant crop from the gods; and if a god should happen, as he sometimes believes, to become incarnate in his own person, then he need appeal to no higher being; he, the savage, possesses in himself all the powers necessary to further his own well-being and that of his fellow-men.

This is one way in which the idea of a man-god is reached. But there is another. Side by side with the view of the world as pervaded by spiritual forces, primitive man has another conception in which we may detect a germ of the modern notion of natural law or the view of nature as a series of events occurring in an invariable order without the intervention of personal agency. The germ of which I speak is involved in that sympathetic magic, as it may be called, which plays a large part in most systems of superstition.

Manifold as are the applications of this crude philosophy—for a philosophy it is as well as an art—the fundamental principles on which it is based would seem to be reducible to two; first, that like produces like, or that an effect resembles its cause; and second, that things which have once been in contact, but have ceased to be so, continue to act on each other as if the contact still persisted. From the first of these principles the savage infers that he can produce any desired effect merely by imitating it; from the second he concludes that he can influence at pleasure and at any distance any person of whom, or any thing of which, he possesses a particle. Magic of the latter sort, resting as it

does on the belief in a certain secret sympathy which unites indissolubly things that have once been connected with each other, may appropriately be termed sympathetic in the strict sense of the term. Magic of the former kind, in which the supposed cause resembles or simulates the supposed effect, may conveniently be described as imitative or mimetic. But inasmuch as the efficacy even of imitative magic must be supposed to depend on a certain physical influence or sympathy linking the imaginary cause or subject to the imaginary effect or object, it seems desirable to retain the name sympathetic magic as a general designation to include both branches of the art. In practice the two are often conjoined; or, to speak more exactly, while imitative magic may be practised by itself, sympathetic magic in the strict sense will generally be found to involve an application of the mimetic principle. This will be more readily understood from the examples with which I will now illustrate both branches of the subject, beginning with the imitative.

Perhaps the most familiar application of the principle that like produces like is the attempt which has been made by many peoples in many ages to injure or destroy an enemy by injuring or destroying an image of him, in the belief that, just as the image suffers, so does the man, and that when it perishes he must die. A few instances out of many may be given to prove at once the wide diffusion of the practice over the world and its remarkable persistence through the ages. For thousands of years ago it was known to the sorcerers of ancient India, Babylon, and Egypt as well as of Greece and Rome, and at this day it is still resorted to by cunning and malignant savages in Australia, Africa, and Scotland. Thus, for example, when an Ojebway Indian desires to work evil on any one, he makes a little wooden image of his enemy and runs a needle into its head or heart, or he shoots an arrow into it, believing that wherever the needle pierces or the arrow strikes the image, his foe will the same instant be seized with a sharp pain in the corresponding part of his body; but if he intends to kill the person outright, he burns or buries the puppet, uttering certain magic words as he does so.

A Malay charm of the same sort is as follows. Take parings of nails, hair, eyebrows, spittle, and so forth of your intended

victim, enough to represent every part of his person, and then make them up into his likeness with wax from a deserted bees' comb. Scorch the figure slowly by holding it over a lamp every night for seven nights, and say:

"It is not wax that I am scorching,
It is the liver, heart, and spleen of So-and-so that I scorch."

After the seventh time burn the figure, and your victim will die. Another form of the Malay charm, which resembles the Ojebway practice still more closely, is to make a corpse of wax from an empty bees' comb and of the length of a footstep: then pierce the eye of the image, and your enemy is blind; pierce the stomach, and he is sick; pierce the head, and his head aches; pierce the breast, and his breast will suffer. If you would kill him outright, transfix the image from the head downwards; enshroud it as you would a corpse; pray over it as if you were praying over the dead; then bury it in the middle of a path where your victim will be sure to step over it. In order that his blood may not be on your head, you should say:

"It is not I who am burying him,
It is Gabriel who is burying him."

Thus the guilt of the murder will be laid on the shoulders of the archangel Gabriel, who is a great deal better able to bear it than you are. In eastern Java an enemy may be killed by means of a likeness of him drawn on a piece of paper, which is then incensed or buried in the ground.

Among the Minangkabauers of Sumatra a man who is tormented by the passion of hate or of unrequited love will call in the help of a wizard in order to cause the object of his hate or love to suffer from a dangerous ulcer known as a *tinggam*. After giving the wizard the necessary instructions as to the name, bodily form, dwelling, and family of the person in question, he makes a puppet which is supposed to resemble his intended victim, and repairs with it to a wood, where he hangs the image on a tree that stands quite by itself. Muttering a spell, he then drives an instrument through the navel of the puppet into the tree, till the sap of the tree oozes through the hole thus made. The instrument which inflicts the wound bears the same name (*tinggam*) as the ulcer which is to be raised on the body of the victim, and the

oozing sap is believed to be his or her life-spirit. Soon afterwards the person against whom the charm is directed begins to suffer from an ulcer, which grows worse and worse till he dies, unless a friend can procure a piece of the wood of the tree to which the image is attached. The sorcerers of Mabuiag or Jervis Island, in Torres Straits, kept an assortment of effigies in stock ready to be operated on at the requirement of a customer. Some of the figures were of stone; these were employed when short work was to be made of a man or woman. Others were wooden; these gave the unhappy victim a little more rope, only, however, to terminate his prolonged sufferings by a painful death. The mode of operation in the latter case was to put poison, by means of a magical implement, into a wooden image, to which the name of the intended victim had been given. Next day the person aimed at would feel chilly, then waste away and die, unless the same wizard who had wrought the charm would consent to undo it. When some of the aborigines of Victoria desired to destroy an enemy, they would occasionally retire to a lonely spot, and drawing on the ground a rude likeness of the victim would sit round it and devote him to destruction with cabalistic ceremonies. So dreaded was this incantation that men and women, who learned that it had been directed against them, have been known to pine away and die of fright. When the wife of a Central Australian native has eloped from him and he cannot recover her, the disconsolate husband repairs with some sympathising friends to a secluded spot, where a man skilled in magic draws on the ground a rough figure supposed to represent the woman lying on her back. Beside the figure is laid a piece of green bark, which stands for her spirit or soul, and at it the men throw miniature spears which have been made for the purpose and charmed by singing over them. This barken effigy of the woman's spirit, with the little spears sticking in it, is then thrown as far as possible in the direction which she is supposed to have taken. During the whole of the operation the men chant in a low voice, the burden of their song being an invitation to the magic influence to go out and enter her body and dry up all her fat. Sooner or later—often a good deal later—her fat does dry up, she dies, and her spirit is seen in the sky in the form of a shooting star.

In Burma a rejected lover sometimes resorts to a sorcerer and engages him to make a small image of the scornful fair one, containing a piece of her clothes, or of something which she has been in the habit of wearing. Certain charms or medicines also enter into the composition of the doll, which is then hung up or thrown into the water. As a consequence the girl is supposed to go mad. In this last example, as in the first of the Malay charms noticed above, imitative magic is combined with sympathetic in the strict sense of the word, since the likeness of the victim contains something which has been in contact with her person. A Matabele who wishes to avenge himself on an enemy makes a clay figure of him and pierces it with a needle; next time the man thus represented happens to engage in a fight he will be speared, just as his effigy was stabbed. . . . .

Further, imitative magic plays a great part in the measures taken by the rude hunter or fisherman to secure an abundant supply of food. On the principle that like produces like, many things are done by him and his friends in deliberate imitation of the result which he seeks to attain; and, on the other hand, many things are scrupulously avoided because they bear some more or less fanciful resemblance to others which would really be disastrous. The Indians of British Columbia live largely upon the fish which abound in their seas and rivers. If the fish do not come in due season, and the Indians are hungry, a Nootka wizard will make an image of a swimming fish and put it into the water in the direction from which the fish generally appear. This ceremony, accompanied by a prayer to the fish to come, will cause them to arrive at once. Much more elaborate are the ceremonies performed by the natives of Central Australia for multiplying the witchetty grubs on which they partially subsist. One of these ceremonies consists of a pantomime representing the fully-developed insect in the act of emerging from the chrysalis. A long narrow structure of branches is set up to imitate the chrysalis case of the grub. In this structure a number of men, who have the grub for their totem, sit and sing of the creature in its various stages. Then they shuffle out of it in a squatting posture, and as they do so they sing of the insect emerging from the chrysalis. This is supposed to multiply the numbers of the grubs.

In the island of Nias, when a wild pig has fallen into the pit prepared for it, the animal is taken out and its back is rubbed with nine fallen leaves, in the belief that this will make nine more wild pigs fall into the pit, just as the nine leaves fell from the tree. In the East Indian islands of Saparoea, Haroekoe, and Noessa Laut, when a fisherman is about to set a trap for fish in the sea, he looks out for a tree, of which the fruit has been much pecked at by birds. From such a tree he cuts a stout branch and makes of it the principal post in his fish-trap; for he believes that just as the tree lured many birds to its fruit, so the branch cut from that tree will lure many fish to the trap. When a Cambodian hunter has set his nets and taken nothing, he strips himself naked, goes some way off, then strolls up to the net as if he did not see it, lets himself be caught in it, and cries, "Hillo! what's this? I'm afraid I'm caught." After that the net is sure to catch game. A pantomime of the same sort has been acted within living memory in our Scottish Highlands. The Rev. James Macdonald, now of Reay in Caithness, tells us that in his boyhood when he was fishing with companions about Loch Aline and they had had no bites for a long time, they used to make a pretence of throwing one of their fellows overboard and hauling him out of the water, as if he were a fish; after that the trout or silloch would begin to nibble, according as the boat was on fresh or salt water. Before a Carrier Indian goes out to snare martens, he sleeps by himself for about ten nights beside the fire with a little stick pressed down on his neck. This naturally causes the fall-stick of his trap to drop down on the neck of the marten. When an Aleut had struck a whale with a charmed spear, he would not throw again, but returned at once to his home, separated himself from his people in a hut specially constructed for the purpose, where he stayed for three days without food or drink, and without seeing or touching a woman. During this time of seclusion he snorted occasionally in imitation of the wounded and dying whale, in order to prevent the whale which he had struck from leaving the coast. On the fourth day he emerged from his seclusion and bathed in the sea, shrieking in a hoarse voice and beating the water with his hands. Then, taking with him a companion, he repaired to that part of the shore

where he expected to find the whale stranded. If the beast was dead, he cut out the place where the death-wound had been inflicted. If it was not dead, he returned to his home and continued washing himself till the whale died. On the principles of imitative magic the hunter who mimics a dying whale clearly helps the beast to die in good earnest. Among the Galelareese, who inhabit a district in the northern part of Halmahera, a large island to the west of New Guinea, it is a maxim that when you are loading your gun to go out shooting, you should always put the bullet in your mouth before you insert it in the gun; for by so doing you practically eat the game that is to be hit by the bullet, which therefore cannot possibly miss the mark. A Malay who has baited a trap for crocodiles, and is awaiting results, is careful in eating his curry always to begin by swallowing three lumps of rice successively; for this helps the bait to slide more easily down the crocodile's throat. He is equally scrupulous not to take any bones out of his curry; for, if he did, it seems clear that the sharp-pointed stick on which the bait is skewered would similarly work itself loose, and the crocodile would get off with the bait. Hence in these circumstances it is prudent for the hunter, before he begins his meal, to get somebody else to take the bones out of his curry, otherwise he may at any moment have to choose between swallowing a bone and losing the crocodile. . . . .

It is to be observed that the belief in a mysterious bond of sympathy which knits together absent friends and relations, especially at critical times of life, is not a thing of yesterday; it has been cherished from time immemorial by the savage, who carries out the principle to its legitimate consequences by framing for himself and his friends a code of rules which are to be strictly observed by them for their mutual safety and welfare in seasons of danger, anxiety, and distress. In particular, these rules regulate the conduct of the persons left at home while a party of their friends is out fishing or hunting or on the war-path. Though we may not be able in every case to explain the curious observances thence arising, all of them clearly assume that people can act by means of sympathetic magic on friends at a distance, and in many of them the action takes the form of doing or avoiding things on account of their supposed resemblance to other things

which would really benefit or injure the absent ones. Examples will illustrate this.

In Laos when an elephant-hunter is starting for the chase, he warns his wife not to cut her hair or oil her body in his absence; for if she cut her hair the elephant would burst the toils, if she oiled herself it would slip through them. When a Dyak village has turned out to hunt wild pigs in the jungle, the people who stay at home may not touch oil or water with their hands during the absence of their friends; for if they did so, the hunters would all be "butter-fingered" and the prey would slip through their hands. In setting out to look for the rare and precious eagle-wood on the mountains, Tcham peasants enjoin their wives, whom they leave at home, not to scold or quarrel in their absence, for such domestic brawls would lead to their husbands being rent in pieces by bears and tigers. . . . . Among the Koniags of Alaska a traveller once observed a young woman lying wrapt in a bearskin in the corner of a hut. On asking whether she were ill, he learned that her husband was out whale-fishing, and that until his return she had to lie fasting in order to ensure a good catch. Among the Esquimaux of Alaska similar notions prevail. The women during the whaling season remain in comparative idleness, as it is considered not good for them to sew while the men are out in the boats. If during this period any garments should need to be repaired, the women must take them far back out of sight of the sea and mend them there in little tents in which just one person can sit. And while the crews are at sea no work should be done at home which would necessitate pounding or hewing or any kind of noise; and in the huts of men who are away in the boats no work of any kind whatever should be carried on. When Bushmen are out hunting, any bad shots they may make are set down to such causes as that the children at home are playing on the men's beds or the like, and the wives who allow such things to happen are blamed for their husbands' indifferent markmanship. Elephant-hunters in East Africa believe that, if their wives prove unfaithful in their absence, this gives the elephant power over his pursuer, who will accordingly be killed or severely wounded. Hence if a hunter hears of his wife's misconduct, he abandons the chase and returns

home. An Aleutian hunter of sea-otters thinks that he cannot kill a single animal if during his absence from home his wife should be unfaithful to him or his sister unchaste. Many of the indigenous tribes of Sarawak are firmly persuaded that were the wives to commit adultery while the husbands are searching for camphor in the jungle, the camphor obtained by the men would evaporate. . . . .

When a band of Carib Indians of the Orinoco had gone on the war-path, their friends left in the village used to calculate as nearly as they could the exact moment when the absent warriors would be advancing to attack the enemy. Then they took two lads, laid them down on a bench, and inflicted a most severe scourging on their bare backs. This the youths submitted to without a murmur, supported in their sufferings by the firm conviction, in which they had been bred from childhood, that on the constancy and fortitude with which they bore the cruel ordeal depended the valour and success of their comrades in the battle.

Among the many beneficent uses to which a mistaken ingenuity has applied the principle of imitative magic, is that of causing trees and plants to bear fruit in due season. In Thüringen the man who sows flax carries the seed in a long bag which reaches from his shoulders to his knees, and he walks with long strides, so that the bag sways to and fro on his back. It is believed that this will cause the flax to wave in the wind. In the interior of Sumatra rice is sown by women who, in sowing, let their hair hang loose down their back, in order that the rice may grow luxuriantly and have long stalks. Similarly, in ancient Mexico a festival was held in honour of the goddess of maize, or "the long-haired mother," as she was called. It began at the time "when the plant had attained its full growth, and fibres shooting forth from the top of the green ear indicated that the grain was fully formed. During this festival the women wore their long hair unbound, shaking and tossing it in the dances which were the chief feature in the ceremonial, in order that the tassel of the maize might grow in like profusion, that the grain might be correspondingly large and flat, and that the people might have abundance." It is a Malay maxim to plant maize when your

stomach is full, and to see to it that your dibble is thick; for this will swell the ear of the maize. More elaborate still are the measures taken by an Esthonian peasant woman to make her cabbages thrive. On the day when they are sown she bakes great pancakes, in order that the cabbages may have great broad leaves; and she wears a dazzling white hood in the belief that this will cause the cabbages to have fine white heads. Moreover, as soon as the cabbages are transplanted, a small round stone is wrapt up tightly in a white linen rag and set at the end of the cabbage bed, because in this way the cabbage heads will grow very white and firm. For much the same reason a Bavarian sower in sowing wheat will sometimes wear a golden ring, in order that the corn may have a fine yellow colour. In the Vosges mountains the sower of hemp pulls his nether garments up as far as he can, because he imagines that the hemp he is sowing will attain the precise height to which he has succeeded in hitching up his breeches; and in the same region another way of ensuring a good crop of hemp is to dance on the roof of the house on Twelfth Day. In Swabia and among the Transylvanian Saxons it is a common custom for a man who has sown hemp to leap high on the field, in the belief that this will make the hemp grow tall. Similarly in many other parts of Germany and Austria the peasant imagines that he makes the flax grow tall by dancing or leaping high, or by jumping backwards from a table; the higher the leap the higher will the flax be that year. The special season for thus promoting the growth of flax is Shrove Tuesday, but in some places it is Candlemas or Walpurgis Night (the eve of May Day). The scene of the performance is the flax field or the farmhouse or the village tavern. In some parts of eastern Prussia the girls dance one by one in a large hoop at midnight on Shrove Tuesday. The hoop is adorned with leaves, flowers, and ribbons, and attached to it are a small bell and some flax. Strictly speaking, the hoop should be wrapt in white linen handkerchiefs, but the place of these is often taken by many-coloured bits of cloth, wool, and so forth. While dancing within the hoop each girl has to wave her arms vigorously and cry "Flax grow!" or words to that effect. When she has done, she leaps out of the hoop, or is lifted out of it by her partner. In Anhalt, when the

sower had sown the flax, he leaped up and flung the seed-bag high in the air, saying, "Grow and turn green! You have nothing else to do." He hoped that the flax would grow as high as he flung the seed-bag in the air. At Quellendorff, in Anhalt, the first bushel of seed-corn had to be heaped up high in order that the corn-stalks should grow tall and bear plenty of grain. Among the Ilocans of Luzon it is a rule that the man who sows bananas must have a small child on his shoulder, or the bananas will bear no fruit. Here the young child on the sower's shoulder clearly represents, and is expected to promote the growth of, the young bananas.

The notion that a person can influence a plant sympathetically by his act or condition comes out clearly in a remark made by a Malay woman. Being asked why she stripped the upper part of her body naked in reaping the rice, she explained that she did it to make the rice-husks thinner, as she was tired of pounding thick-husked rice. Clearly, she thought that the less clothing she wore the less husk there would be on the rice. . . . . In Swabia they say that if a fruit-tree does not bear, you should keep it loaded with a heavy stone all summer, and next year it will be sure to bear. The magic virtue of a pregnant woman to communicate fertility is known also to Bavarian and Austrian peasants, who think that if you give the first fruit of a tree to a woman with child to eat, the tree will bring forth abundantly next year. In Bohemia for a similar purpose the first apple of a young tree is sometimes plucked and eaten by a woman who has borne many children, for then the tree will be sure to bear many apples. When a tree bears no fruit, the Galelareese think it is a male; and their remedy is simple. They put a woman's petticoat on the tree, which, being thus converted into a female, will naturally prove prolific. Arguing similarly from what may be called the infectiousness of qualities or accidents, the same people say that you ought not to shoot with a bow and arrows under a fruit-tree, or the tree will cast its fruit even as the arrows fall to the ground. . . . .

A curious application of the doctrine of sympathy is the relation commonly believed to exist between a wounded man and the agent of the wound, so that whatever is subsequently

done by or to the agent must correspondingly affect the patient either for good or evil. Thus Pliny tells us that if you have wounded a man and are sorry for it, you have only to spit on the hand that gave the wound, and the pain of the sufferer will be instantly alleviated. In Melanesia, if a man's friend gets possession of the arrow which wounded him, they keep it in a damp place or in cool leaves, for then the inflammation will be trifling and will soon subside. Meantime the enemy who shot the arrow is hard at work to aggravate the wound by all means in his power. For this purpose he and his friends drink hot and burning juices and chew irritating leaves, for this will clearly inflame and irritate the wound. Further, they keep the bow near the fire to make the wound which it has inflicted hot; and for the same reason they put the arrow-head, if it has been recovered, into the fire. Moreover, they are careful to keep the bow-string taut and to twang it occasionally, for this will cause the wounded man to suffer from tension of the nerves and spasms of tetanus. Similarly when a Kwakiutl Indian of British Columbia had bitten a piece out of an enemy's arm, he used to drink hot water afterwards for the purpose of thereby inflaming the wound in his foe's body. Among the Lkuñgen Indians of the same region it is a rule that an arrow, or any other weapon that has wounded a man, must be hidden by his friends, who have to be careful not to bring it near the fire till the wound is healed. If a knife or an arrow which is still covered with a man's blood were thrown into the fire, the wounded man would grow very ill. "It is constantly received and avouched," says Bacon, "that the anointing of the weapon that maketh the wound will heal the wound itself. In this experiment, upon the relation of men of credit (though myself, as yet, am not fully inclined to believe it), you shall note the points following: first, the ointment wherewith this is done is made of divers ingredients, whereof the strangest and hardest to come by are the moss upon the skull of a dead man unburied, and the fats of a boar and a bear killed in the act of generation." The precious ointment compounded out of these and other ingredients was applied, as the philosopher explains, not to the wound but to the weapon, and that even though the injured man was at a great distance and knew nothing about it. The experi-

ment, he tells us, had been tried of wiping the ointment off the weapon without the knowledge of the person hurt, with the result that he was presently in a great rage of pain until the weapon was anointed again. Moreover, "it is affirmed that if you cannot get the weapon, yet if you put an instrument of iron or wood resembling the weapon into the wound, whereby it bleedeth, the anointing of that instrument will serve and work the effect." Remedies of the sort which Bacon deemed worthy of his attention are still in vogue in Suffolk. If a man cuts himself with a bill-hook or a scythe he always takes care to keep the weapon bright, and oils it to prevent the wound from festering. If he runs a thorn or, as he calls it, a bush into his hand, he oils or greases the extracted thorn. A man came to a doctor with an inflamed hand, having run a thorn into it while he was hedging. On being told that the hand was festering, he remarked, "That didn't ought to, for I greased the bush well arter I pulled it out." If a horse wounds its foot by treading on a nail, a Suffolk groom will invariably preserve the nail, clean it, and grease it every day, to prevent the foot from festering. Arguing in the same way, a Suffolk woman, whose sister had burnt her face with a flat-iron, observed that "the face would never heal till the iron had been put out of the way; and even if it did heal, it would be sure to break out again every time the iron was heated." Similarly in the Harz mountains they say that if you cut yourself, you ought to smear the knife or the scissors with fat and put the instrument away in a dry place in the name of the Father, of the Son, and of the Holy Ghost. As the knife dries, the wound heals. Other people, however, in Germany say that you should stick the knife in some damp place in the ground, and that your hurt will heal as the knife rusts. Others again, in Bavaria, recommend you to smear the axe or whatever it is with blood and put it under the eaves.

The train of reasoning which thus commends itself to English and German rustics, in common with the savages of Melanesia and America, is carried a step further by the aborigines of Central Australia, who conceive that under certain circumstances the near relations of a wounded man must grease themselves, restrict their diet, and regulate their behaviour in other ways in

order to ensure his recovery. Thus when a lad has been circumcised and the wound is not yet healed, his mother may not eat opossum, or a certain kind of lizard, or carpet snake, or any kind of fat, for otherwise she would retard the healing of the boy's wound. Every day she greases her digging-sticks and never lets them out of her sight; at night she sleeps with them close to her head. No one is allowed to touch them. Every day also she rubs her body all over with grease, as in some way this is believed to help her son's recovery. Another refinement of the same principle is due to the ingenuity of the German peasant. It is said that when one of his beasts breaks its leg, a Hessian farmer will bind up the broken leg of a chair or table with bandages and splints in due form. For nine days thereafter the bandaged chair-leg, or table-leg may not be touched or moved. . . . .

The fatal flaw of magic lies not in its general assumption of a succession of events determined by law, but in its total misconception of the nature of the particular laws which govern that succession. If we analyse the various cases of sympathetic magic which have been passed in review in the preceding pages, and which may be taken as fair samples of the bulk, we shall find them to be all mistaken applications of one or other of two great fundamental laws of thought, namely, the association of ideas by similarity and the association of ideas by contiguity in space or time. A mistaken association of similar ideas produces imitative or mimetic magic; a mistaken association of contiguous ideas produces sympathetic magic in the narrower sense of the word. The principles of association are excellent in themselves, and indeed absolutely essential to the working of the human mind. Legitimately applied they yield science; illegitimately applied they yield magic, the bastard sister of science. It is therefore a truism, almost a tautology, to say that all magic is necessarily false and barren; for were it ever to become true and fruitful, it would no longer be magic but science. From the earliest times man has been engaged in a search for general rules whereby to turn the order of natural phenomena to his own advantage, and in the long search he has scraped together a great hoard of such maxims, some of them golden and some of them mere dross. The true

or golden rules constitute the body of applied science which we call the arts; the false are magic.

If magic is thus next of kin to science, we have still to inquire how it stands related to religion. But the view we take of that relation will necessarily be coloured by the idea which we have formed of the nature of religion itself; hence a writer may reasonably be expected to define his conception of religion before he proceeds to investigate its relation to magic. There is probably no subject in the world about which opinions differ so much as the nature of religion, and to frame a definition of it which would satisfy every one must obviously be impossible. All that a writer can do is, first, to say clearly what he means by religion, and afterwards to employ the word consistently in that sense throughout his work. By religion, then, I understand a propitiation or conciliation of powers superior to man which are believed to direct and control the course of nature and of human life. In this sense it will readily be perceived that religion is opposed in principle both to magic and to science. For all conciliation implies that the being conciliated is a conscious or personal agent, that his conduct is in some measure uncertain, and that he can be prevailed upon to vary it in the desired direction by a judicious appeal to his interests, his appetites, or his emotions. Conciliation is never employed towards things which are regarded as inanimate, nor towards persons whose behaviour in the particular circumstances is known to be determined with absolute certainty. Thus in so far as religion assumes the world to be directed by conscious agents who may be turned from their purpose by persuasion, it stands in fundamental antagonism to magic as well as to science, both of which take for granted that the course of nature is determined, not by the passions or caprice of personal beings, but by the operation of immutable laws acting mechanically. In magic, indeed, the assumption is only implicit, but in science it is explicit. It is true that magic often deals with spirits, which are personal agents of the kind assumed by religion; but whenever it does so in its proper form, it treats them exactly in the same fashion as it treats inanimate agents—that is, it constrains or coerces instead of conciliating or propitiating them as religion would do. . . . .

Yet though magic is thus found to fuse and amalgamate with religion in many ages and in many lands, there are some grounds for thinking that this fusion is not primitive, and that there was a time when man trusted to magic alone for the satisfaction of such wants as transcended his immediate animal cravings. In the first place a consideration of the fundamental notions of magic and religion may incline us to surmise that magic is older than religion in the history of humanity. We have seen that on the one hand magic is nothing but a mistaken application of the very simplest and most elementary processes of the mind, namely the association of ideas by virtue of resemblance or contiguity; and on the other hand that religion assumes the operation of conscious or personal agents, superior to man, behind the visible screen of nature. Obviously the conception of personal agents is more complex than a simple recognition of the similarity or contiguity of ideas; and a theory which assumes that the course of nature is determined by conscious agents is more abstruse and recondite, and requires for its apprehension a far higher degree of intelligence and reflection than the view that things succeed each other simply by reason of their contiguity or resemblance. The very beasts associate the ideas of things that are like each other or that have been found together in their experience; and they could hardly survive for a day if they ceased to do so. But who attributes to the animals a belief that the phenomena of nature are worked by a multitude of invisible animals or by one enormous and prodigiously strong animal behind the scenes? It is probably no injustice to the brutes to assume that the honour of devising a theory of this latter sort must be reserved for human reason. Thus, if magic be deduced immediately from elementary processes of reasoning, and be, in fact, an error into which the mind falls almost spontaneously, while religion rests on conceptions which the merely animal intelligence can hardly be supposed to have yet attained to, it becomes probable that magic arose before religion in the evolution of our race, and that man essayed to bend nature to his wishes by the sheer force of spells and enchantments before he strove to coax and mollify a coy, capricious, or irascible deity by the soft insinuation of prayer and sacrifice.

The conclusion which we have thus reached deductively from a consideration of the fundamental ideas of religion and magic is confirmed inductively by what we know of the lowest existing race of mankind. To the student who investigates the development of vegetable and animal life on our globe, Australia serves as a sort of museum of the past, a region in which strange species of plants and animals, representing types that have long been extinct elsewhere, may still be seen living and thriving, as if on purpose to satisfy the curiosity of these later ages as to the fauna and flora of the antique world. This singularity Australia owes to the comparative smallness of its area, the waterless and desert character of a large part of its surface, and its remote situation, severed by wide oceans from the other and greater continents. For these causes, by concurring to restrict the number of competitors in the struggle for existence, having mitigated the fierceness of the struggle itself; and thus many a quaint old-fashioned creature, many an antediluvian oddity, which would long ago have been rudely elbowed and hustled out of existence in more progressive countries, has been suffered to jog quietly along in this preserve of Nature's own, this peaceful garden, where the hand on the dial of time seems to move more slowly than in the noisy bustling world outside. And the same causes which have favoured the survival of antiquated types of plants and animals in Australia, have conserved the aboriginal race at a lower level of mental and social development than is now occupied by any other set of human beings spread over an equal area elsewhere. Without metals, without houses, without agriculture, the Australian savages represent the stage of material culture which was reached by our remote ancestors in the Stone Age; and the rudimentary state of the arts of life among them reflects faithfully the stunted condition of their minds. Now in regard to the question of the respective priority of magic or religion in the evolution of thought, it is very important to observe that among these rude savages, while magic is universally practised, religion in the sense of a propitiation or conciliation of the higher powers seems to be nearly unknown. Roughly speaking, all men in Australia are magicians, but not one is a priest; everybody fancies he can influence his fellows or the course of

nature by sympathetic magic, but nobody dreams of propitiating gods or spirits by prayer and sacrifice. "It may be truly affirmed," says a recent writer on the Australians, "that there was not a solitary native who did not believe as firmly in the power of sorcery as in his own existence; and while anybody could practice it to a limited extent, there were in every community a few men who excelled in pretension to skill in the art. The titles of these magicians varied with the community, but by unanimous consent the whites have called them 'doctors,' and they correspond to the medicine-men and rain-makers of other barbarous nations. The power of the doctor is only circumscribed by the range of his fancy. He communes with spirits, takes aerial flights at pleasure, kills or cures, is invulnerable and invisible at will, and controls the elements."

But if in the most primitive state of human society now open to observation on the globe we find magic thus conspicuously present and religion conspicuously absent, may we not reasonably conjecture that the civilised races of the world have also at some period of their history passed through a similar intellectual phase, that they attempted to force the great powers of nature to do their pleasure before they thought of courting their favour by offerings and prayer—in short that, just as on the material side of human culture there has everywhere been an Age of Stone, so on the intellectual side there has everywhere been an Age of Magic? There are reasons for answering this question in the affirmative. When we survey the existing races of mankind from Greenland to Tierra del Fuego, or from Scotland to Singapore, we observe that they are distinguished one from the other by a great variety of religions, and that these distinctions are not, so to speak, merely coterminous with the broad distinctions of race, but descend into the minuter subdivisions of states and commonwealths, nay, that they honeycomb the town, the village, and even the family, so that the surface of society all over the world is cracked and seamed, wormed and sapped with rents and fissures and yawning crevasses opened up by the disintegrating influence of religious dissension. Yet when we have penetrated through these differences, which affect mainly the intelligent and thoughtful part of the community, we shall

find underlying them all a solid stratum of intellectual agreement among the dull, the weak, the ignorant, and the superstitious, who constitute, unfortunately, the vast majority of mankind. One of the great achievements of the century which is now nearing its end is to have run shafts down into this low mental stratum in many parts of the world, and thus to have discovered its substantial identity everywhere. It is beneath our feet—and not very far beneath them—here in Europe at the present day, and it crops up on the surface in the heart of the Australian wilderness and wherever the advent of a higher civilisation has not crushed it under ground. This universal faith, this truly Catholic creed, is a belief in the efficacy of magic. While religious systems differ not only in different countries, but in the same country in different ages, the system of sympathetic magic remains everywhere and at all times substantially alike in its principles and practice. Among the ignorant and superstitious classes of modern Europe it is very much what it was thousands of years ago in Egypt and India, and what it now is among the lowest savages surviving in the remotest corners of the world. If the test of truth lay in a show of hands or a counting of heads, the system of magic might appeal, with far more reason than the Catholic Church, to the proud motto, "Quod semper, quod ubique, quod ob omnibus," as the sure and certain credential of its own infallibility.—J. G. Frazer, *The Golden Bough*, 2d ed., 1:9–74 (Macmillan, 1900).

AUSTRALIAN MEDICINE MEN AND MAGIC

I have adopted the term "medicine-men" as a convenient and comprehensive term for those men who are usually spoken of in Australia as "Blackfellow doctors"—men who in the native tribes profess to have supernatural powers. The term "doctor" is not strictly correct, if by it is meant only a person who uses some means of curing disease. The powers which these men claim are not merely those of healing, or causing disease, but also such as may be spoken of as magical practices relating to, or in some manner affecting, the well-being of their friends and enemies. Again, the medicine-man is not always a "doctor;" he

may be a "rain-maker," "seer," or "spirit-medium," or may practise some special form of magic.

I may roughly define "doctors" as men who profess to extract from the human body foreign substances which, according to aboriginal belief, have been placed in them by the evil magic of other medicine-men, or by supernatural beings, such as *Brewin* of the Kurnai, or the *Ngarrang* of the Wurunjerri. *Ngarrang* is described as being like a man with a big beard and hairy arms and hands, who lived in the large swellings which are to be seen at the butts of some of the gum-trees, such as the Red Gum, which grows on the river flats, in the Wurunjerri country. The *Ngarrang* came out at night in order to cast things of evil magic into incautious people passing by their haunts. The effect of their magic was to make people lame. As they were invisible to all but the medicine-men, it was to them that people had recourse when they thought that a *Ngarrang* had caught them. The medicine-man by his art extracted the magic in the form of quartz, bone, wood, or other things.

Other medicine-men were bards who devoted their poetic faculties to the purposes of enchantment, such as the *Bunjil-yenjin* of the Kurnai, whose peculiar branch of magic was composing and singing potent love charms.

At first sight the subject of this chapter might seem to be a very simple one, since the practices of the medicine-man may appear to be no more than the actions of cunning cheats, by which they influence others to their own personal benefit. But on a nearer inspection of the subject it becomes evident that there is more than this to be said. They believe more or less in their own powers, perhaps because they believe in those of others. The belief in magic in its various forms—in dreams, omens, and warnings—is so universal, and mingles so intimately with the daily life of the aborigines, that no one, not even those who practise deceit themselves, doubts the power of other medicine-men, or that if men fail to effect their magical purposes the failure is due to error in the practice, or to the superior skill or power of some adverse practitioner.

Allowing for all conscious and intentional deception on the part of these men, there still remains a residuum of faith in

themselves which requires to be noticed, and if possible to be explained.

It is in this aspect that the question has shown itself as being most difficult to me. The problem has been how to separate falsehood from truth, cunning imposture from *bona fide* actions, and deliberate falsification from fact. The statements which I have made in these pages are the result of long-continued inquiries as well as personal observation. I must say for my aboriginal informants, that I have found them truthful in their statements to me whenever I have been able to check them by further inquiries, and in only one instance did I notice any tendency to enlarge the details into proportions beyond their true shape. Even this instance was very instructive. The man's information as to the customs of his tribe, and especially as to the initiation ceremonies, I found to be very accurate, but it was when he began to speak of the magical powers of the old men of the past generation that I found his colouring to be too brilliant, and more especially as regarded his tribal father, the last great warrior-magician of the tribe. In his exaggeration of the exploits of this man one might see an instructive example of how very soon an heroic halo of romance begins to gather round the memory of the illustrious dead.

It is not difficult to see how, amongst savages having no real knowledge of the causes of disease, which is the common lot of humanity, the very suspicion of such a thing as death from natural causes should be unknown. Death by accident they can imagine, although the results of what we should call accident they mostly attribute to the effects of some evil magic. They are well acquainted with death by violence, but even in this they believe, as among the tribes about Maryborough (Queensland), that a warrior who happens to be speared in one of the ceremonial fights has lost his skill in warding off or evading a spear, through the evil magic of some one belonging to his own tribe. But I doubt if, anywhere in Australia, the aborigines, in their pristine condition, conceived the possibility of death merely from disease. Such was certainly not the case with the Kurnai.

In all the tribes I refer to there is a belief that the medicine-men can project substances in an invisible manner into their

victims. One of the principal projectiles is said to be quartz, especially in the crystallised form. Such quartz crystals are always, in many parts of Australia, carried as part of the stock-in-trade of the medicine-man, and are usually carefully concealed from sight, especially of women, but are exhibited freely to the novices at the initiation ceremonies. Since the advent of white men pieces of broken bottle have sometimes taken the place of quartz crystals. Among the Yuin the hair of deceased relatives, for instance of father or brother, is used for making bags in which to carry quartz crystals, called by them *Krugullung*.

When travelling in the country back of the Darling River, before it was settled, I came across a blackfellow doctor, who accompanied me for the day, and he greatly alarmed my two black boys by seemingly causing a quartz crystal to pass from his hand into his body.

The *Kunki* or medicine-man of the Dieri tribe is supposed to have direct communication with supernatural beings called *Kutchi*, and also with the *Mura-muras*. He interprets dreams, and reveals to the relatives of the dead the person by whom the deceased has been killed. *Kutchi* was the cause of sickness and other evils, but could be driven out by suitable means applied by the *Kunki*. On one occasion Mr. Gason had caught cold, and Jalina-piramurana, hearing of it, sent to him to ask permission to "drive *Kutchi* out of the Police camp" before he came to examine Mr. Gason professionally as a medicine-man. If a Dieri has had a dream, and fancies he has seen a departed friend during the night, he reports the circumstance to a *Kunki*, and most likely embellishes the details. The *Kunki* probably declares that it is a vision and not a dream, and announces his opinion in camp in an excited speech. For the Dieri distinguish between what they consider a vision and a mere dream. The latter is called *Apitcha*, and is thought to be a mere fancy of the head. The visions are attributed to *Kutchi*, the powerful and malignant being, who gives to the *Kunki* his power of producing disease and death, or of healing that which has been brought about by some other *Kunki*. If the *Kunki* declares that he has had a real vision of his departed friend, he may order food to be placed for the dead, or a fire to be made so that he can come and warm himself. But

it depends largely on the manner in which the interpretation is received by the elders whether the *Kunki* follows it up. The *Kunki* say that, like a *Kutchi,* they can fly up to the sky by means of a hair cord, and see a beautiful country full of trees and birds. It is said that they drink the water of the sky-land, from which they obtain the power to take the life of those they doom.

One of the most common spells used by the Dieri is "pointing with the bone" (human fibula), and this practice is called *Mukuelli-Dukana,* from *Muku,* "a bone," and *Dukana,* "to strike." Therefore, as soon as a person becomes ill, there is a consultation of his friends to find out who has "given him the bone." If he does not get better, his wife, if he has one, if not, then the wife of his nearest relative, accompanied by her *Pirrauru,* is sent to the person suspected. To him she gives a small present, saying that her husband, or so-and-so, has fallen ill, and is not expected to get better. The medicine-man knows by this that he is suspected; and, fearing revenge, probably says that she can return, as he will withdraw all power from the bone, by steeping it in water. If the man dies, and especially if he happens to be a man of importance, the suspected man is certain to be killed by the *Pinya.* When the tribe wished to kill some one at a distance, the principal men have joined in pointing their respective bones, wrapped in emu feathers and fat, in the direction of the intended victim, and at the same time naming him and the death they desired him to die. All those present at such a ceremony, which lasts about an hour, are bound to secrecy. Should they hear after a time that the intended victim continues to remain alive and well, they explain it by saying that some one in his tribe stopped the power of the bone.

It is almost always the case for two persons to act together in "giving the bone." One of them points with it, and also ties the end of the hair cord, which is fastened to it, tightly round his upper arm in order that the blood may be driven through it into the bone. The other person holds the end of another cord fastened to the bone, and goes through the same motions as he who is holding the bone. This is done because the legend which accounts for the origin of this practice in the Mura-mura times recounts how two of the Mura-muras, acting together, revenged

the murder of a Mura-mura boy by "giving the bone" to those who had killed him.

In the Tongaranka tribe, and in all the tribes of the Itchumundi nation, pointing with the bone is practised. The medicine-man obtains the fibula of a dead man's leg, which is scraped, polished, and ornamented with red ochre, and a cord of the dead man's hair is attached to it. It is believed that any person towards whom the bone is pointed will surely die, and a medicine-man who is known to have such a bone is feared accordingly. Another way of pointing the bone is by laying a piece of the leg-bone of a kangaroo or an emu, sharply pointed at one end, on the ground in the direction of the intended victim when he is asleep. After a time this is removed and placed in some secret place, point downwards, in a hole dug in the ground filled up with sticks and leaves, and then burnt. As the bone is consumed, it is thought to enter into the victim, who then feels ill, and falls down and dies. As the bone is believed to cause pain, sickness, and ultimately death, so a victim can be cured by a medicine-man sucking the cause out of him, and producing it as a piece of bone. Apart from the direct removal of the bone by the medicine-man, another remedy is to rub the victim with the ashes of the bone, if they can be found.

There is a peculiar form of pointing among the Wiradjuri. Some of the medicine-men use a small piece of wood shaped like a bull-roarer, placed close to the fire but pointing towards the intended victim, with the belief that when this instrument, which is called *Dutimal*, becomes quite hot, it springs up and enters the victim without his being aware of it. Others of the Wiradjuri believe that people are killed by a medicine-man getting a piece of a man's clothes and roasting it, wrapped up with some of a dead man's fat, in front of a fire. This is said to catch the smell of the person from his clothing. The former wearer of it is then expected to fall ill and die shortly after. This form of evil magic is called *Murrai-illa*.

The medicine-man of the Wiradjuri also uses a kind of charm called *Yangura*, consisting of the hair of a dead man mixed with his fat and that of the lace-lizard, rolled into a ball and fastened to a stick about six inches long. This is carefully con-

cealed by the medicine-man until he wishes to make a person ill, or cause his death. Then it is unwrapped and laid before a fire, pointing in the direction of the intended victim. It is believed that the spirit of the dead man whose fat has been used will help the charm to act.

In the Wotjobaluk tribe when a man was believed to have "pointed the bone" at another, the friends of the latter would request the former to place the bone in water so as to undo the mischief which he might have caused. If a man died from "pointing the bone," his friends would take measures to kill the offender by the same means, or by direct violence.

The Kurnai fastened some personal object belonging to the intended victim to a spear-thrower, together with some eagle-hawk's feathers and some kangaroo or human fat. The spear-thrower was then stuck slanting in the ground before a fire, and over it the medicine-man sang his charm. This was generally called "singing the man's name" until the stick fell, when the magic was considered to be complete. Those who used this form of evil magic were called *Bunjil-murriwun,* the latter word being the name of the spear-thrower. It was, as the Kurnai say, made strong, that is, magically powerful, by being rubbed with kangaroo fat. Although most commonly used for roasting things, it could be also used, as the Kurnai think, in a very fatal manner, by sticking it in the ground where the victim had attended to a call of nature, and in such a case the medicine-man sang the name of the victim, mentioning also the death which he was to die.

An instance of the manner in which the spear-thrower is used, or rather in which Tankowillin wished to use it, came under my notice in the year 1888. He came to me and asked for the loan of a spear-thrower which I had, and which he thought to be of special magical power, because it had been used at the *Jeraeil* ceremonies. He informed me that he wanted it to catch one of the tribe who had married a relation of his, a widow, without the consent of her kindred, and also far too soon after the death of her husband, indeed so soon that "it had made all the poor fellow's friends sad, thinking of him." When I refused him the use of the *Murriwun,* he said it did not matter, for he and his

friends had made a very strong stick to point at him with, singing his name over it, and spitting strong poison over it.

He used the word "poison" for "magic," but I think that in some tribes actual poison was used. For instance, in the Yuin tribe the *Gommeras* are credited with killing people by putting things in their food and drink. I was informed that one of these substances is a yellow powder. My informant said that he once obtained some of it from one of the old *Gommeras,* and having rubbed it on some meat, he gave it to a kangaroo dog, who fell down and died very shortly.

A similar statement comes to me from the Kamilaroi on the Gwydir River. About Moree it is said that the medicine-men have two kinds of poison, which they use to kill people with. The poisons are called *Wuru-kahrel* and *Dinna-kurra,* from *Dinna,* "a foot," and *Kurra,* "to catch." It is said that they get these poisons by putting the dung of the native cat in a hole in an ant-hill, covered up with gum-leaves. After a while a white mossy powder comes on it, which they say is the poison. It is said to be very slow in its action, taking three weeks to operate. I give this for what it is worth.

I may note also that the Rev. George Taplin mentions in his account of the Narrinyeri tribe the *Neilyeri,* or poison revenge, which is by using a spear-head or a piece of bone which has been stuck in the fleshy part of a putrid corpse, and kept there for some weeks. This weapon is used by pricking an enemy when asleep, and thus inoculating him with the virus of death.

Such are the beliefs as to poisons from widely separated places. I have no means of testing their truth, but my informants fully believed in their effects, and there is no special improbability in their use by the medicine-men.

Returning again to the practice of roasting things for the purpose of harming the owners of them, I mention another form of it by the Wotjobaluk. In this they used a small spindle-shaped piece of wood called *Guliwil,* in the same manner as other tribes used the spear-thrower or yam-stick. The name *Guliwil* was not used for these pieces of wood, usually of the Bull-oak (*Casuarina glauca*) alone, but also for the whole implement, which consisted of three or four of the pieces of wood, and was tied up with

some article belonging to the intended victim and human fat. Each *Guliwil* has on it some marks, such as a rude effigy of the victim, and of some of the poisonous snakes. The bundle was roasted for a long time, or for several times at intervals.

I am told that after the whites settled on the Wimmera River the Wotjobaluk employed on the stations found the great chimneys of the huts, especially of those which were used as kitchens, unrivalled places in which to hang their *Guliwils* so as to expose them to a prolonged heat.

The following is an account, by one of the Wotjobaluk old men, of the effects produced by such a *Guliwil,* or the belief in it, which amounts to the same thing. "Sometimes a man dreams that some one has got some of his hair, or a piece of his food, or of his 'possum rug, or indeed anything that he has used. If he dreams this several times, he feels sure that it is so, and he calls his friends together and tells them he is dreaming too much about 'that man,' who must have something belonging to him. He says, 'I feel in the middle of the fire; go and ask him if he has anything of mine in the fire.' His friends do his bidding, probably adding, 'You need not deny it, he has dreamed of it three times, and dreams are generally true.' Sometimes the suspected *Bangal* (medicine-man) seeing no other way out of it, admits that he has something that he is burning, but makes the excuse that it was given to him to burn, and that he did not know to whom it belonged. In such a case he would give the thing to the friends of the sick man, telling them to put it in water to put the fire out; and when this had been done, the man would probably feel better."

In the Jupagalk tribe the method was to tie the thing, or fragment which had belonged to, or been touched by, the intended victim, to the end of a digging-stick, by a piece of cord. This was stuck in the ground in front of a fire; and as it swung there, the *Bangal* sang over it till it fell, which was a sign that the spell was complete.

Among the Kulin tribes the practice was to use a spear-thrower for this purpose instead of a digging-stick, and it was called *Kalbura-murriwun,* or broken spear-thrower.

The Wurunjerri believed firmly that the *Wirrarap* (medicine-

man) could kill persons, far or near, by means of *Mung*, or evil magic, through the agency of many substances, among which the *Thundal*, or quartz crystals, stood first. This he could project, either invisibly, or else as a small whirlwind a foot or so high. The effect on a man caught in such a way was, according to Berak, that he felt a chill, then pains and shortness of breath. A medicine-man, being consulted, would look at him and say, "Hallo! there is a lot of *Mung* in you." Then alone, or with other medicine-men, he sat near and watched the man, until one of them saw the magical substance trying to escape, it might be in the middle of the night. Then he would run after it, catch it, and breaking a piece off it to prevent it escaping again, put it into his magic-bag for future use. Any article once belonging to, or having been used by, the intended victim, would serve to work an evil spell. A piece of his hair, some of his fæces, a bone picked up by him and dropped, a shred of his opossum rug, would suffice, and among the Wotjobaluk, if he were seen to spit, this would be carefully picked up with a piece of wood, and used for his destruction.

The old beliefs are also adapted to their new surroundings since the settlement of Australia by the whites. The Wurunjerri dreaded a practice attributed to the native tribes about Echuca whom they called *Meymet*. This was the pounded flesh of a dead man with cut-up tobacco. This, given to the unsuspecting victim, caused him, when he smoked it, to fall under a deadly spell, which no *Wirrarap* could cure. The result was the internal swelling of the smoker till he died. Another instance of evil magic peculiar to the Wudthaurung tribe, the western neighbours of the Wurunjerri, was to put the rough cones of the She-oak (*Casuarina quadrivalvis*) into a man's fire, so that the smoke might blow into his eyes and blind him. The idea seems to have been that the eidolon of the rough seed cones would magically produce injury, as the object itself might do. This belief points to an attempted explanation of ophthalmia.

Besides these applications of evil magic, there was another form of this practice, namely, by placing sharp fragments of quartz, glass, bone, or charcoal in a person's foot-prints, or in the impression of his body where he has lain down. Rheumatic

affections are often attributed to this cause. Once, seeing a Tatungalung man very lame, I asked him what was the matter. He replied, "Some fellow put bottle into my foot." I found out that he had acute rheumatism, and he believed that some enemy had found his footprint and buried in it a fragment of a broken bottle, the magic of which had entered into his foot.

One of the practices of the Wiimbaio *Mekigar* (medicine-man) was to step among the crowd at a corrobboree, and pick up something off the ground, saying that it was a piece of *nukalo* (quartz) which some *Mekigar* at a distance had thrown at them.

When following down Cooper's Creek in search of Burke's party, we were followed by a number of wild blacks, who appeared much interested in examining and measuring the foot-prints of the horses and camels. My blackboy, from the Darling River, rode up to me with the utmost alarm exhibited in his face and said, "Look at those wild blackfellows!" I said, "Well, they are all right." Then he replied, "I am sure they are putting poison in my footsteps." This is another instance of the use of the word "poison" for "magic."

The practice of using human fat as a powerful magical ingredient is widely spread over Australia, and consequently the belief is universal that the medicine-men have the power of abstracting it magically from individuals, or also of actually taking it by violence accompanied by magic. This is usually spoken of by the whites as taking "the kidney fat," but it appears to be the caul-fat from the omentum.

It is said by the Wiimbaio that the medicine-men of hostile tribes sneak into the camp in the night, and with a net of a peculiar construction garrotte one of the tribe, drag him a hundred yards or so from the camp, cut up his abdomen obliquely, take out the kidney and caul-fat, and then stuff a handful of grass and sand into the wound. The strangling-net is then undone, and if the victim is not quite dead, he generally dies in twenty-four hours, although it is said that some have survived the operation for three days. The fat is greatly prized, and is divided among the adults, who anoint their bodies with it and carry some of it about, as they believe the prowess and virtues of the victim will pass to those who use the fat.

But they also say that the *Mekigar* of such tribes can knock a man down in the night with a club called *Yuri-battra-piri*, that is, ear-having-club, a club having two corners, *i. e.* ears. The man being thus knocked down, his assailant would remove his fat without leaving a sign of the operation. They had a great horror of those men of other tribes who, they believe, prowled about seeking to kill people. They called them *Thinau-malkin*, that is, "one who spreads a net for the feet," and *Kurinya-matola*, "one who seizes by the throat." These were their real enemies, and when they caught them they blotted them out by eating part of their bodies. Once when the Wiimbaio feared that their enemies from the south, the Wotjobaluk, might come and attack them, they requested a white man who was with them to sleep in the opening of a horseshoe-shaped screen of boughs, which they built around their camp. They said that their enemies would not step over a white man, but would otherwise come in among them and put cords on their throats, and thus having choked them, would carry them off and take their fat. . . . .

I have now spoken of the manner in which the medicine-men, according to the beliefs of the aborigines, are accustomed to work ill upon them. It remains to show these men in a more favourable light, as alleviating suffering, and shielding their friends from the evil magic of others. One of the special functions of the medicine-man is to counteract the spells made by others.

Their method of procedure is that common in savage tribes, and which has been so often described that it may be dismissed in a few words, being, in perhaps the majority of cases, a cure effected by rubbing, pressing or sucking the affected part, possibly accompanied by an incantation or song, and the exhibition of some foreign body, extracted therefrom, as the cause of the evil. Or the evil magic may be sucked out as a mouthful of wind and blown away, or got rid of by pinching and squeezing to allay the pain. In some cases the "poison," as they now call it in their "pidgin English," is supposed to be extracted through a string, or a stick, by the doctor from the patient, who then spits it out in the form of blood. . . . .

As an instance of the methods used by the Kurnai, I give the

practice of Tankli the son of Bunjil-bataluk. His method of cure was to stroke the affected part with his hand till, as he said, he could "feel the thing under the skin." Then, covering the place with a piece of some fabric, he drew it together with one hand, and unfolding it he exhibited a piece of quartz, bone, bark, or charcoal, even on one occasion a glass marble as the cause of the disease. The use of the fabric was quite evident to any one but a blackfellow.

The Tongaranka medicine-man, when about to practise his art, sits down on the windward side of his patient, and his power is supposed to pass to the sick person "like smoke." The doctor then sucks the affected part, and withdraws his power out of him, and also at the same time the pain, usually in the form of a quartz crystal.

One of the curative practices of the Wiimbaio was curiously associated with the offender. If, for instance, a man had nearly killed his wife in a paroxysm of rage, he was compelled to submit to bleeding. The woman was laid out at length on the ground in some convenient spot, and her husband's arms were each bound tightly above the elbow. The medicine-man opened the vein and the blood was allowed to flow over the prostrate body of the woman till the man felt faint. . . . .

Collins, in speaking of the natives of Port Jackson, mentions a matter which is worth quoting here. He says, "During the time that Booroong, a native girl, lived at Sydney, she paid occasional visits to the lower part of the harbour. From one of these she returned extremely ill. On being questioned as to the cause, she said that the women of Cam-mer-ray had made water in a path which they knew that she was to pass, and it had made her ill. Not recovering, though bled by a surgeon, she underwent an extraordinary and superstitious operation. She was seated on the ground with one of the lines worn by the men passed round her head once, taking care to fix the knot in the centre of her forehead; the remainder of the line was taken by another girl, who sat at a small distance from her, and with the end of it fretted her lips until they bled very copiously; Booroong imagining all the time that the blood came from her own head, and passed along the line until it ran into the girl's

mouth. This operation they term *Be-anny,* and it is the peculiar province of the women." . . . .

At Port Stephens the *Koradji* treated a sick person by winding around him a cord of opossum fur, and then round the body of some female relative or friend, who held the end of it in her hands, and passed the cord to and fro between her lips, until the blood dropped into a bowl, over which she held her head. It was believed that the evil magic which caused the disease passed up the cord into the body of the operator, and thence with the blood into the bowl. . . . .

In time of severe drought Mr. Gason has witnessed the Dieri calling upon the rain-making *Mura-muras* to give them power to make a heavy rainfall, crying out in loud voices the impoverished state of the country, and the half-starved condition of the tribe, in consequence of the difficulty in procuring food in sufficient quantity to preserve life.

During such a drought, to which the Dieri country is much subject, the rain-making ceremonies are considered of much consequence. Mr. Gason witnessed them many times, and gave the following account of them.

When the great council has determined that such a ceremony is to be held, women, accompanied by their *Pirraurus,* are sent off to the various subdivisions of the tribe, to summon the people to attend at some appointed place. When the tribe is gathered together, they dig a hole about two feet deep, twelve long, and from eight to ten feet wide. Over this they build a hut of logs with the interstices filled in with slighter logs, the building being conical in form and covered with boughs. This hut is only sufficiently large to contain the old men, the younger ones being seated at the entrance or outside. This being completed, the women are called together to look at the hut, which they approach from the rear, and then separating, some go one way and some the other round the building, until they reach the entrance, each one looking inside but without speaking. They then return to their camp, about five hundred yards distant.

Two *Kunkis,* who are supposed to have received an inspiration from the rain-making *Mura-muras,* are selected to have their arms lanced. These are tightly bound near the shoulders

to prevent a too profuse effusion of blood. This being done, all the old men huddle together in the hut, and the principal *Kunki* of the tribe bleeds each of the men inside the arm below the elbow with a sharp piece of flint. The blood is made to flow on the men sitting round, during which the two *Kunkis* throw handfuls of down into the air, some of which becomes attached to the blood on the men, while some still floats about. The blood is to symbolise the rain, and the down the clouds. Two large stones are placed in the centre of the hut, representing gathering clouds presaging rain. The women are now called to visit the hut again, and after having looked in and seen its inmates, they return to their camp.

The main part of the rain-making ceremony being now concluded, the men who were bled carry away the two stones and place them as high as possible in the branches of the largest tree about. In the meantime the other men gather gypsum, pound it fine, and throw it into a water-hole. The *Mura-mura* is supposed to see this, and thereupon to cause the clouds to appear in the sky. Should no clouds appear as soon as expected, the explanation given is that the *Mura-mura* is angry with them; and should there be no rain for weeks or months after the rain-making ceremony, they suppose that some other tribe has stopped their power.

After the ceremony, the hut is thrown down by the men, old and young butting at it with their heads. The heavier logs which withstand this are pulled down by all dragging at the bottom end. The piercing the hut with their heads symbolises the piercing of the clouds, and the fall of the hut symbolises that of the rain.

In the rainy seasons which are too wet, the Dieri also supplicate the *Mura-muras* to restrain the rain, and Mr. Gason has seen the old men in a complete state of frenzy, believing that their ceremonies had caused the *Mura-muras* to send too much of it. . . . . A. W. Howitt, *Native Tribes of South-East Australia,* 355–96.

THE ALGONKIN MANITOU

The Algonkin conception of the manitou is bound up with the manifold ideas that flow from an unconscious relation with the outside world. It is embodied in all forms of religious belief

and practice, and is intimately associated with customs and usages that bear upon life and its welfare. It is the purpose in the following pages to give simply, and in as few words as possible, the meaning of the manitou as it is understood by three Algonkin peoples—the Sauk, Fox, and Kickapoo. All three speak related dialects of the same language; all three have a similar form of society; and all three have much the same religious rites and practices. It will be convenient to refer to them collectively, and when the reference is made the term Algonkin shall be used; the term shall apply to them only, and not to other units of the same family.

In the first place the term manitou is a religious word; it carries with it the idea of solemnity; and whatever the association it always expresses a serious attitude, and kindles an emotional sense of mystery. The conceptions involved in its use can best be shown by taking up some features of Algonkin religion.

The essential character of Algonkin religion is a pure, naïve worship of nature. In one way or another associations cluster about an object and give it a certain potential value; and because of this supposed potentiality, the object becomes the recipient of an adoration. The degree of the adoration depends in some measure upon the extent of confidence reposed in the object, and upon its supposed power of bringing pleasure or inflicting pain. The important thing with the individual is the emotional effect experienced while in the presence of the object, or with an interpreted manifestation of the object. The individual keeps watch for the effect, and it is the effect that fills the mind with a vague sense of something strange, something mysterious, something intangible. One feels it as the result of an active substance, and one's attitude toward it is purely passive.

To experience a thrill is authority enough of the existence of the substance. The sentiment of its reality is made known by the fact that something has happened. It is futile to ask an Algonkin for an articulate definition of the substance, partly because it would be something about which he does not concern himself, and partly because he is quite satisfied with only the sentiment of its existence. He feels that the property is everywhere, is omnipresent. The feeling that it is omnipresent leads naturally

to the belief that it enters into everything in nature; and the notion that it is active causes the mind to look everywhere for its manifestations. These manifestations assume various forms, they vary with individuals and with reference to the same and different objects. Language affords means of approaching nearer to a definition of this religious sentiment.

In the Algonkin dialects of the Sauk, Fox, and Kickapoo, a rigid distinction of gender is made between things with life and things without life. When they speak of a stone they employ a form which expresses the inanimate character of the stone; in the same way, when they speak of a dog they use another form which indicates the animate nature of the dog. Accordingly, when they refer to the manitou in the sense of a virtue, a property, an abstraction, they employ the form expressive of inanimate gender. When the manitou becomes associated with an object, then the gender becomes less definite. Some reasons for this confusion will become evident farther on.

When the property becomes the indwelling element of an object, then it is natural to identify the property with animate being. It is not necessary that the being shall be the tangible representative of a natural object. To illustrate a concrete instance of this sentiment, here is the comment made by a Fox apropos of an experience in the sweat lodge: "Often one will cut one's self over the arms and legs, slitting one's self only through the skin. It is done to open up many passages for the manitou to pass into the body. The manitou comes from the place of its abode in the stone. It becomes roused by the heat of the fire, and proceeds out of the stone when the water is sprinkled on it. It comes out in the steam, and in the steam it enters the body wherever it finds entrance. It moves up and down and all over inside the body, driving out everything that inflicts pain. Before the manitou returns to the stone it imparts some of its nature to the body. That is why one feels so well after having been in the sweat lodge."

The sentiment behind the words rests upon the consciousness of a belief in an objective presence; it rests on the sense of an existing reality with the quality of self-dependence; it rests on the perception of a definite, localized personality. Yet at the

same time there is the feeling that the apprehended reality is without form and without feature. This is the dominant notion in regard to the virtue abiding in the stone of the sweat lodge; it takes on the character of conscious personality with some attributes of immanence and design.

Falling in line with what has just gone before is the belief that the virtue can be transferred from one object to another. The virtue in both objects is of the same fundamental nature, but of different degree and of unequal value. In the transfer, the virtue of one object reinforces that of the other. Such is the idea implied in the following abridged narrative.

A body of Sauks had wandered out on the Plains in search of buffalo. While approaching a vast herd they came unexpectedly upon some Comanches who were much fewer than they and who were creeping upon the same herd. The Sauks rushed them, and the Comanches at once took to flight. But in the pursuit the Sauks were delayed by a lone Comanche. He had chosen to sacrifice his life in order to give his comrades a chance to escape. He accomplished his purpose. The man's deed and the bravery he displayed aroused a feeling of admiration from his foes. And out of honor for the man they chose not to take his scalp nor to count coup upon him. But instead they cut out his heart. Passing it around, they all ate of it.

So much for the narrative in brief. To the Algonkin the heart was endued with the manitou, the sense of the manitou being an impersonal essence, a supernatural virtue. The men ate the heart to get its supernatural quality. They believed that the quality was what made the Comanche so brave, and that by eating the heart they could come into possession of its quality. They felt that it would react upon them in the same way as it had upon the Comanche; and furthermore, that the combined effect of the quality within them and what was in the Comanche would render it possible for them to become better fighters than they could otherwise have become. The example betrays the reliance placed upon the help of the cosmic substance rather than upon human aid. The reliance does not rest upon a random hope, but on an assurance that the expected will come to pass with a happy result.

It is natural to confuse the property with an object containing the property. The confusion is frequently met with in what are considered mediums of manifestations. For instance, there is an Algonkin story which contains an episode of the cosmic hero taking upon himself the form of a pretty maiden. The girl comes to a lodge where she is entertained by an aged woman. The old woman prepares two grains of corn and a bean, and putting them into a small bowl, invites the girl to eat. The girl nibbles one grain at a time, and for every grain that is taken out, there is always another to take its place. Finally the girl eats up the food and returns the vessel empty to the hostess. The old woman looks with wonder at the empty bowl, and then turning to the girl, remarks, "You must be a manitou!"

It is desirable to point out two arrestive features, arrestive to the sense of an Algonkin who is a passive, uncritical listener to the tale. One is the continued multiplication of the food, and the other is the interruption of the performance. One's unconscious feeling about the food is that its recurrence was due to the work of the impersonal, mystic property with which the food was charged and because of which it was replenished; and that the amazement of the old woman was due to the surprise felt at the sight of a miraculous interruption of a miraculous multiplying process. She laid the cause to the girl, whom she addressed as an animate form of the substance. Naming her an animate manitou was the same as making the property and the creature one and the same thing.

Here is another story which illustrates the ambiguity, but in a different relation. It is the story of a man and his wife who had gone off on a distant hunt for game. One evening they caught sight of some Sioux who had been shadowing them. In the gathering darkness and during a drizzling rain they set out in flight. The Sioux were moving about them on every side, and were signalling back and forth with the cries of birds and animals in an effort to locate the pair.

Despairing of escape by their own help, the man and his wife stopped and dismounted. The man was not able to get into *rapport* with the mystery, and so called upon his wife. In a little while she heard words coming to her from on high. They

were words spoken to her by her elder brother when she was a child; he had spoken them during a fast and on the day he had died. They were: "If ever in the course of your life you meet with adversity, then think of me." With these words were others telling how she and her husband should escape. The story goes on to tell how the pair followed the advice and how they made their escape.

The story has one purpose: it is to tell of deliverance by the help of a transcendent agency; in this case it is an elder brother who comes as a mystic apparition invested with the cosmic substance, and having the attribute of prophecy and guidance.

Further instances of the confusion are to be found in the narratives of individual experiences in trance and dream transport. Boys and girls begin early to practice seclusion, and at the time refrain from touching food. During the earlier periods the fasting is of short duration, and with hardly any further meaning than that of a preparation for the ordeals yet to come; the performance becomes more serious during adolescence, and it is of the utmost importance during maturity. One then fasts and keeps vigil in the hope of gaining insight into the mystery of life. One adjusts one's self to a particular mental attitude, and so goes seriously prepared to see, to hear, and to feel. In this mental condition one sometimes sees strange objects, one sometimes hears prophetic warnings, and one sometimes feels the spell of an all-pervading presence. It is during one or more of these experiences that one is said to come into possession of hidden revelation.

Vision does not come to every one that fasts. But when one is fortunate enough to experience a mystic transport at the sight of something animate, or inanimate, then one is apt to make that object an ideal of divine guidance. Of or through it one invokes aid in the critical moments of life. It is not easy for an Algonkin to convey a definite idea of the nature of the object: it may be the inanimate, mystic property, or it may be a medium of the property. Much depends upon what the individual reads into the manifestation, and this in turn is colored by instruction received before the transport.

Some, however, do not see the objects themselves, but they

hear their sounds or their voices. To judge from the testimony of individuals who have had the transport, it would seem that it is more common to hear than to see. The words caught convey a profound sense of authority; they must influence the course of one's actions. It is from this kind of experience that some claim to have derived sacred songs and forms of ritual. It was from this source that came the Ghost-dance, at least so was it taught the Sauk, Fox, and Kickapoo. Its ritual, its songs, its step, its teaching were all said to have been revealed to a young woman, who in turn transmitted it all to the people of her nation.

The most common experience seems to be that of being overwhelmed by an all-encompassing presence. It is an experience least susceptible of an articulate report, and yet it is the one looked upon as the source of greatest authority. It is not easy to induce an Algonkin to speak of any of these experiences. It is even urged upon the individual never to reveal the details except on particular occasions, and in critical moments like that of approaching death. Many of them, however, have passed into tradition, and here is the shortened account of one of the experiences:—

A youth once accompanied a party of warriors on a raid against a people of the Plains. The party was beaten and the youth was killed. In accordance with an Algonkin custom, the family of the slain adopted another youth to take the place left vacant by death. The adopted youth had been a bosom friend of the slain. The act of his adoption placed upon him the responsibility of avenging the death of his friend.

Before entering upon the mission he went, as was the custom, into a fast, that he might obtain mystic guidance. Accordingly, so goes the story, the youth had a vision, and there was open to him a view of the battlefield where his friend had been slain, of the location of the enemy that had caused the death, and of the path to be taken in order to come upon the foe. And in the vision he saw himself eating of the enemy. This last was for him a symbol that his mission would have a happy issue.

The narrative is typical of the more usual forms of revelation. The youth had gone primed to meet with a particular experience; he received tidings of just the sort of thing he was looking for.

It is not easy to find out how much of this sort of thing is fraud. Beyond doubt there is some fabrication, and much is read into an experience; but there is also reason to believe that it is seldom done with intent; and that it is usually the result of an unconscious self-deception. The visitation is attributed to animate beings. "The manitou beings have taken pity upon me" is the stock phrase uttered by one coming out of such a vision. These "beings" are not tangible realities. The term manitou beings is but an intelligible form of expressing the exciting cause; it is more natural to identify the communication with animate beings, in spite of the consciousness that the beings themselves are vague and inarticulate.

There is no doubt in an Algonkin's mind about the reality of these revelations; the feeling that one saw something arrestive, that one heard impressive voices, that one was overcome by an objective, mysterious presence is proof enough to establish the reality of the revelation. But it is doubtful if an Algonkin would think of going into the question of authority. One is sure of it, but why, one does not know, any more than that it is the inspired assurance of a transcendent agency.

The interpretation of the cause of the revelation varies with individuals. If the cause is something present to the thought, then it is likely the work of the mystic activity. This is the interpretation sometimes given by one who has been overcome by the presence of the mystery without form and without feature. In another sense and one more frequent, it is the effect of the combined presence of all the manitou beings taken together. If the object of the revelation be present to the sense, then the interpretation is liable to confusion. For instance, if the revealing object be an owl, then the interpretation is likely to take one or the other of these two forms: either the owl is a vessel or conveyance of the property; or else the owl is the property itself. In the first case, the manitou manifests itself through the agency of an owl. The notion here of a difference between the object and what it contains differentiates the vessel from the property. In the other case, the property becomes so intimately associated with the object that the object and the property come to be one and the same. The confusion of the object and the property does

away with the consciousness of any differentiation. The personification is easy and of unconscious mould. The notion that the object and the property are one and the same thing is the interpretation one more commonly meets with. The sense of incongruity or improbability does not enter to disturb the mind.

So universal and easy is this lack of mental discrimination that it is no trouble for an Algonkin to invest an object with the mystic substance, and then call the object by the name of the substance. The process suggests a possible explanation of how an Algonkin comes to people his world with manitou forces different in kind and degree; it explains in some measure the supernatural performances of mythological beings, the beings that move in the form of men, beasts, birds, fishes, and other objects of nature. All these are a collection of agencies. Each possesses a virtue in common with all the rest, and in so far do they all have certain marks of agreement. Where one differs from another it is in the nature of its function, and in the degree of the possession of the cosmic substance. But the investment of a common, mystic virtue gives them all a common name, and that name is manitou.

The emotional effect produced by the strange but sincere regard for the manitou explains much of the esoteric sentiment felt for a myth, a tradition, a form of ritual, or anything whatsoever connected with a ceremonial practice. An Algonkin holds that the proper time to recite a myth is in winter, and that its recitation shall be attended with some kind of formality; and that to tell a myth out of season and without formality is to take chances with something beyond human power. It requires but a gentle scare to set one who has committed the infraction into a state of mental confusion. The sentiment behind the myth rests on the naïve belief that the myth may be either the supernatural property or an agent of the property. Hence, to play lightly with it is like playing lightly with any other idealized object associated with the supernatural substance. The infraction creates a feeling of unrest, a disturbing sense of insecurity.

In the same way one needs to seek for a psychological reason to explain why an Algonkin feels reluctant to speak about a sacred ceremony except in moments propitious and opportune.

The ceremonial lodge is a holy symbol; it means a place where one can enter into communication with higher powers, where with sacrifice and offering, with music and dance one obtains audience and can ask for things beyond human control; it means a place where one can forget the material world and enjoy the experience of that magic spell which one feels is the sign that not only is one in the presence of the supernatural property, but in that of the beings who hold it in high degree. It is a function with a very definite purpose. It is to invoke the presence of an objective reality; the objectified ideal may be animate or inanimate. And the effect is in the nature of a pleasing thrill, a sense of resignation, a consolation. This effect is the proof of the presence of the manitou.

It has thus been observed that there is an unsystematic belief in a cosmic, mysterious property which is believed to be existing everywhere in nature; that the conception of the property can be thought of as impersonal, but that it becomes obscure and confused when the property becomes identified with objects in nature; that it manifests itself in various forms; and that its emotional effect awakens a sense of mystery; that there is a lively appreciation of its miraculous efficacy; and that its interpretation is not according to any regular rule, but is based on one's feelings rather than on one's knowledge.

Such in very brief statement is the conception of the manitou of three Algonkin peoples,—the Sauk, Fox, and Kickapoo. It seems probable that the same thing holds true of other Algonkins, like the Ojibwas, Ottawas, Menominees, and others of the central group. It would be interesting to know if the same conception in its general features extends to all other members of the family.—William Jones, *Journal of American Folk-Lore*, 18:183–90.

ANIMISM

Are there, or have there been, tribes of men so low in culture as to have no religious conceptions whatever? This is practically the question of the universality of religion, which for so many centuries has been affirmed and denied, with a confidence in striking contrast to the imperfect evidence on which both affirmation and denial have been based. Ethnographers, if looking to a

theory of development to explain civilization, and regarding its successive stages as arising one from another, would receive with peculiar interest accounts of tribes devoid of all religion. Here, they would naturally say, are men who have no religion because their forefathers had none, men who represent a præ-religious condition of the human race, out of which in the course of time religious conditions have arisen. It does not, however, seem advisable to start from this ground in an investigation of religious development. Though the theoretical niche is ready and convenient, the actual statue to fill it is not forthcoming. The case is in some degree similar to that of the tribes asserted to exist without language or without the use of fire; nothing in the nature of things seems to forbid the possibility of such existence, but as a matter of fact the tribes are not found. Thus the assertion that rude non-religious tribes have been known in actual existence, though in theory possible, and perhaps in fact true, does not at present rest on that sufficient proof which, for an exceptional state of things, we are entitled to demand.

It is not unusual for the very writer who declares in general terms the absence of religious phenomena among some savage people, himself to give evidence that shows his expressions to be misleading. Thus Dr. Lang not only declares that the aborigines of Australia have no idea of a supreme divinity, creator, and judge, no object of worship, no idol, temple, or sacrifice, but that 'in short, they have nothing whatever of the character of religion, or of religious observance, to distinguish them from the beasts that perish.' More than one writer has since made use of this telling statement, but without referring to certain details which occur in the very same book. From these it appears that a disease like small-pox, which sometimes attacks the natives, is ascribed by them 'to the influence of Budyah, an evil spirit who delights in mischief;' that when the natives rob a wild bees' hive, they generally leave a little of the honey for Buddai; that at certain biennial gatherings of the Queensland tribes, young girls are slain in sacrifice to propitiate some evil divinity; and that, lastly, according to the evidence of the Rev. W. Ridley, 'whenever he has conversed with the aborigines, he found them to have definite traditions concerning supernatural beings—Baiame, whose voice

they hear in thunder, and who made all things, Turramullun the chief of demons, who is the author of disease, mischief, and wisdom, and appears in the form of a serpent at their great assemblies, &c.' By the concurring testimony of a crowd of observers, it is known that the natives of Australia were at their discovery, and have since remained, a race with minds saturated with the most vivid belief in souls, demons, and deities. In Africa, Mr. Moffat's declaration as to the Bechuanas is scarcely less surprising—that 'man's immortality was never heard of among that people,' he having remarked in the sentence next before, that the word for the shades or manes of the dead is 'liriti.' In South America, again, Don Felix de Azara comments on the positive falsity of the ecclesiastics' assertion that the native tribes have a religion. He simply declares that they have none; nevertheless in the course of his work he mentions such facts as that the Payaguas bury arms and clothing with their dead and have some notions of a future life, and that the Guanas believe in a Being who rewards good and punishes evil. In fact, this author's reckless denial of religion and law to the lower races of this region justifies T'Orbigny's sharp criticism, that 'this is indeed what he says of all the nations he describes, while actually proving the contrary of his thesis by the very facts he alleges in its support.'

Such cases show how deceptive are judgments to which breadth and generality are given by the use of wide words in narrow senses. Lang, Moffat, and Azara are authors to whom ethnography owes much valuable knowledge of the tribes they visited, but they seem hardly to have recognized anything short of the organized and established theology of the higher races as being religion at all. They attribute irreligion to tribes whose doctrines are unlike theirs, in much the same manner as theologians have so often attributed atheism to those whose deities differed from their own, from the time when the ancient invading Aryans described the aboriginal tribes of India as *adeva*, i. e. 'godless,' and the Greeks fixed the corresponding term ἄθεοι on the early Christians as unbelievers in the classic gods, to the comparatively modern ages when disbelievers in witchcraft and apostolical succession were denounced as atheists; and down to our

own day, when controversialists are apt to infer, as in past centuries, that naturalists who support a theory of development of species therefore necessarily hold atheistic opinions. These are in fact but examples of a general perversion of judgment in theological matters, among the results of which is a popular misconception of the religions of the lower races, simply amazing to students who have reached a higher point of view. Some missionaries, no doubt, thoroughly understand the minds of the savages they are to deal with, and indeed it is from men like Cranz, Dobrizhoffer, Charlevoix, Ellis, Hardy, Callaway, J. L. Wilson, T. Williams, that we have obtained our best knowledge of the lower phases of religious belief. But for the most part the 'religious world' is so occupied in hating and despising the beliefs of the heathen whose vast regions of the globe are painted black on the missionary maps, that they have little time or capacity left to understand them. It cannot be so with those who fairly seek to comprehend the nature and meaning of the lower phases of religion. These, while fully alive to the absurdities believed and the horrors perpetrated in its name, will yet regard with kindly interest all record of men's earnest seeking after truth with such light as they could find. Such students will look for meaning, however crude and childish, at the root of doctrines often most dark to the believers who accept them most zealously; they will search for the reasonable thought which once gave life to observances now become in seeming or reality the most abject and superstitious folly. The reward of these enquirers will be a more rational comprehension of the faiths in whose midst they dwell, for no more can he who understands but one religion understand even that religion, than the man who knows but one language can understand that language. No religion of mankind lies in utter isolation from the rest, and the thoughts and principles of modern Christianity are attached to intellectual clues which run back through far præ-Christian ages to the very origin of human civilization, perhaps even of human existence.

While observers who have had fair opportunities of studying the religions of savages have thus sometimes done scant justice to the facts before their eyes, the hasty denials of others who have judged without even facts can carry no great weight. A

16th century traveller gave an account of the natives of Florida which is typical of such: 'Touching the religion of this people, which wee have found, for want of their language wee could not understand neither by signs nor gesture that they had any religion or lawe at all. . . . . We suppose that they have no religion at all, and that they live at their own libertie.' Better knowledge of these Floridans nevertheless showed that they had a religion, and better knowledge has reversed many another hasty assertion to the same effect; as when writers used to declare that the natives of Madagascar had no idea of a future state, and no word for soul or spirit; or when Dampier enquired after the religion of the natives of Timor, and was told that they had none; or when Sir Thomas Roe landed in Saldanha Bay on his way to the court of the Great Mogul, and remarked of the Hottentots that 'they have left off their custom of stealing, but know no God or religion.' Among the numerous accounts collected by Sir John Lubbock as evidence bearing on the absence of low development of religion among low races, some may be selected as lying open to criticism from this point of view. Thus the statement that the Samoan Islanders had no religion cannot stand, in face of the elaborate description by the Rev. G. Turner of the Samoan religion itself; and the assertion that the Tupinambas of Brazil had no religion is one not to be received on merely negative evidence, for the religious doctrines and practices of the Tupi race have been recorded by Lery, De Laet, and other writers. Even with much time and care and knowledge of language, it is not always easy to elicit from savages the details of their theology. They try to hide from the prying and contemptuous foreigner their worship of gods who seem to shrink, like their worshippers, before the white man and his mightier Deity. Mr. Sproat's experience in Vancouver's Island is an apt example of this state of things. He says: 'I was two years among the Ahts, with my mind constantly directed towards the subject of their religious beliefs, before I could discover that they possessed any ideas as to an overruling power or a future state of existence. The traders on the coast, and other persons well acquainted with the people, told me that they had no such ideas, and this opinion was confirmed by conversation with many of the less intelligent

savages; but at last I succeeded in getting a satisfactory clue.' It then appeared that the Ahts had all the time been hiding a whole characteristic system of religious doctrines as to souls and their migrations, the spirits who do good and ill to men, and the great gods above all. Thus, even where no positive proof of religious ideas among any particular tribe has reached us, we should distrust its denial by observers whose acquaintance with the tribe in question has not been intimate as well as kindly. It is said of the Andaman Islanders that they have not the rudest elements of a religious faith; yet it appears that the natives did not even display to the foreigners the rude music which they actually possessed, so that they could scarcely have been expected to be communicative as to their theology, if they had any. In our time the most striking negation of the religion of savage tribes is that published by Sir Samuel Baker, in a paper read in 1866 before the Ethnological Society of London, as follows: 'The most northern tribes of the White Nile are the Dinkas, Shillooks, Nuehr, Kytch, Bohr, Aliab, and Shir. A general description will suffice for the whole, excepting the Kytch. Without any exception, they are without a belief in a Supreme Being, neither have they any form of worship or idolatry; nor is the darkness of their minds enlightened by even a ray of superstition.' Had this distinguished explorer spoken only of the Latukas, or of other tribes hardly known to ethnographers except through his own intercourse with them, his denial of any religious consciousness to them would have been at least entitled to stand as the best procurable account, until more intimate communication should prove or disprove it. But in speaking thus of comparatively well known tribes such as the Dinkas, Shilluks, and Nuehr, Sir S. Baker ignores the existence of published evidence, such as describes the sacrifices of the Dinkas, their belief in good and evil spirits (adjok and djyok), their good deity and heaven-dwelling creator, Dendid, as likewise Néar the deity of the Nuehr, and the Shilluks' creator, who is described as visiting, like other spirits, a sacred wood or tree. Kaufmann, Brun-Rollet, Lejean, and other observers, had thus placed on record details of the religion of these White Nile tribes, years before Sir S. Baker's rash denial that they had any religion at all.

The first requisite in a systematic study of the religions of the lower races, is to lay down a rudimentary definition of religion. By requiring in this definition the belief in a supreme deity or of judgment after death, the adoration of idols or the practice of sacrifice, or other partially-diffused doctrines or rites, no doubt many tribes may be excluded from the category of religious. But such narrow definition has the fault of identifying religion rather with particular developments than with the deeper motive which underlies them. It seems best to fall back at once on this essential source, and simply to claim, as a minimum definition of Religion, the belief in Spiritual Beings. If this standard be applied to the descriptions of low races as to religion, the following results will appear. It cannot be positively asserted that every existing tribe recognizes the belief in spiritual beings, for the native condition of a considerable number is obscure in this respect, and from the rapid change or extinction they are undergoing, may ever remain so. It would be yet more unwarranted to set down every tribe mentioned in history, or known to us by the discovery of antiquarian relics, as necessarily having possessed the defined minimum of religion. Greater still would be the unwisdom of declaring such a rudimentary belief natural or instinctive in all human tribes of all times; for no evidence justifies the opinion that man, known to be capable of so vast an intellectual development, cannot have emerged from a non-religious condition, previous to that religious condition in which he happens at present to come with sufficient clearness within our range of knowledge. It is desirable, however, to take our basis of enquiry in observation rather than from speculation. Here, so far as I can judge from the immense mass of accessible evidence, we have to admit that the belief in spiritual beings appears among all low races with whom we have attained to thoroughly intimate acquaintance; whereas the assertion of absence of such belief must apply either to ancient tribes, or to more or less imperfectly described modern ones. The exact bearing of this state of things on the problem of the origin of religion may be thus briefly stated. Were it distinctly proved that non-religious savages exist or have existed, these might be at least plausibly claimed as representatives of the condition of Man before he arrived at the religious

stage of culture. It is not desirable, however, that this argument should be put forward, for the asserted existence of the non-religious tribes in question rests, as we have seen, on evidence often mistaken and never conclusive. The argument for the natural evolution of religious ideas among mankind is not invalidated by the rejection of an ally too weak at present to give effectual help. Non-religious tribes may not exist in our day, but the fact bears no more decisively on the development of religion, than the impossibility of finding a modern English village without scissors or books or lucifer-matches bears on the fact that there was a time when no such things existed in the land.

I purpose here, under the name of Animism, to investigate the deep-lying doctrine of Spiritual Beings, which embodies the very essence of Spiritualistic as opposed to Materialistic philosophy. Animism is not a new technical term, though now seldom used. From its special relation to the doctrine of the soul, it will be seen to have a peculiar appropriateness to the view here taken of the mode in which theological ideas have been developed among mankind. The word Spiritualism, though it may be, and sometimes is, used in a general sense, has this obvious defect to us, that it has become the designation of a particular modern sect, who indeed hold extreme spiritualistic views, but cannot be taken as typical representatives of these views in the world at large. The sense of Spiritualism in its wider acceptation, the general belief in spiritual beings, is here given to Animism.

Animism characterizes tribes very low in the scale of humanity, and thence ascends, deeply modified in its transmission, but from first to last preserving an unbroken continuity, into the midst of high modern culture. Doctrines adverse to it, so largely held by individuals or schools, are usually due not to early lowness of civilization, but to later changes in the intellectual course, to divergence from, or rejection of, ancestral faiths; and such newer developments do not affect the present enquiry as to the fundamental religious condition of mankind. Animism is, in fact, the groundwork of the Philosophy of Religion, from that of savages up to that of civilized men. And although it may at first sight seem to afford but a bare and meagre definition of a minimum of religion, it will be found prac-

tically sufficient; for where the root is, the branches will generally be produced. It is habitually found that the theory of Animism divides into two great dogmas, forming parts of one consistent doctrine; first, concerning souls of individual creatures, capable of continued existence after the death or destruction of the body; second, concerning other spirits, upward to the rank of powerful deities. Spiritual beings are held to affect or control the events of the material world, and man's life here and hereafter; and it being considered that they hold intercourse with men, and receive pleasure or displeasure from human actions, the belief in their existence leads naturally, and it might almost be said inevitably, sooner or later to active reverence and propitiation. Thus Animism in its full development, includes the belief in souls and in a future state, in controlling deities and subordinate spirits, these doctrines practically resulting in some kind of active worship. One great element of religion, that moral element which among the higher nations forms its most vital part, is indeed little represented in the religion of the lower races. It is not that these races have no moral sense or no moral standard, for both are strongly marked among them, if not in formal precept, at least in that traditional consensus of society which we call public opinion, according to which certain actions are held to be good or bad, right or wrong. It is that the conjunction of ethics and Animistic philosophy, so intimate and powerful in the higher culture, seems scarcely yet to have begun in the lower. I propose here hardly to touch upon the purely moral aspects of religion, but rather to study the animism of the world so far as it constitutes, as unquestionably it does constitute, an ancient and world-wide philosophy, of which belief is the theory and worship is the practice. Endeavouring to shape the materials for an enquiry hitherto strangely undervalued and neglected, it will now be my task to bring as clearly as may be into view the fundamental animism of the lower races, and in some slight and broken outline to trace its course into higher regions of civilization. Here let me state once for all two principal conditions under which the present research is carried on. First, as to the religious doctrines and practices examined, these are treated as belonging to theological systems devised by human reason, without supernatural

aid or revelation; in other words, as being developments of Natural Religion. Second, as to the connexion between similar ideas and rites in the religions of the savage and the civilized world. While dwelling at some length on doctrines and ceremonies of the lower races, and sometimes particularizing for special reasons the related doctrines and ceremonies of the higher nations, it has not seemed my proper task to work out in detail the problems thus suggested among the philosophies and creeds of Christendom. Such applications, extending farthest from the direct scope of a work on primitive culture, are briefly stated in general terms, or touched in slight allusion, or taken for granted without remark. Educated readers possess the information required to work out their general bearing on theology, while more technical discussion is left to philosophers and theologians specially occupied with such arguments.

The first branch of the subject to be considered is the doctrine of human and other Souls, an examination of which will occupy the rest of the present chapter. What the doctrine of the soul is among the lower races, may be explained in stating the animistic theory of its development. It seems as though thinking men, as yet at a low level of culture, were deeply impressed by two groups of biological problems. In the first place, what is it that makes the difference between a living body and a dead one; what causes waking, sleep, trance, disease, death? In the second place, what are those human shapes which appear in dreams and visions? Looking at these two groups of phenomena, the ancient savage philosophers probably made their first step by the obvious inference that every man has two things belonging to him, namely, a life and a phantom. These two are evidently in close connexion with the body, the life as enabling it to feel and think and act, the phantom as being its image or second self; both, also, are perceived to be things separable from the body, the life as able to go away and leave it insensible or dead, the phantom as appearing to people at a distance from it. The second step would seem also easy for savages to make, seeing how extremely difficult civilized men have found it to unmake. It is merely to combine the life and the phantom. As both belong to the body, why should they not also belong to one another, and be manifesta-

tations of one and the same soul? Let them then be considered as united, and the result is that well-known conception which may be described as an apparitional-soul, a ghost-soul. This, at any rate, corresponds with the actual conception of the personal soul or spirit among the lower races, which may be defined as follows: It is a thin unsubstantial human image, in its nature a sort of vapour, film, or shadow; the cause of life and thought in the individual it animates; independently possessing the personal consciousness and volition of its corporeal owner, past or present; capable of leaving the body far behind, to flash swiftly from place to place; mostly impalpable and invisible, yet also manifesting physical power, and especially appearing to men waking or asleep as a phantasm separate from the body of which it bears the likeness; continuing to exist and appear to men after the death of that body; able to enter into, possess, and act in the bodies of other men, of animals, and even of things. Though this definition is by no means of universal application, it has sufficient generality to be taken as a standard, modified by more or less divergence among any particular people. Far from these world-wide opinions being arbitrary or conventional products, it is seldom even justifiable to consider their uniformity among distant races as proving communication of any sort. They are doctrines answering in the most forcible way to the plain evidence of men's senses, as interpreted by a fairly consistent and rational primitive philosophy. So well, indeed, does primitive animism account for the facts of nature, that it has held its place into the higher levels of education. Though classic and mediæval philosophy modified it much, and modern philosophy has handled it yet more unsparingly, it has so far retained the traces of its original character, that heirlooms of primitive ages may be claimed in the existing psychology of the civilized world. Out of the vast mass of evidence, collected among the most various and distant races of mankind, typical details may now be selected to display the earlier theory of the soul, the relation of the parts of this theory, and the manner in which these parts have been abandoned, modified, or kept up, along the course of culture.

To understand the popular conception of the human soul or spirit, it is instructive to notice the words which have been found

suitable to express it. The ghost or phantasm seen by the dreamer or the visionary is an unsubstantial form, like a shadow or reflexion, and thus the familiar term of the *shade* comes in to express the soul. Thus the Tasmanian word for the shadow is also that for the spirit; the Algonquins describe a man's soul as *otahchuk,* 'his shadow;' the Quiché language uses *natub* for 'shadow, soul;' the Arawak *ueja* means 'shadow, soul, image;' the Abipones made the one word *loákal* serve for 'shadow, soul, echo, image.' The Zulus not only use the word *tunzi* for 'shadow, spirit, ghost,' but they consider that at death the shadow of a man will in some way depart from the corpse, to become an ancestral spirit. The Basutos not only call the spirit remaining after death the *seriti* or 'shadow,' but they think that if a man walks on the river bank, a crocodile may seize his shadow in the water and draw him in; while in Old Calabar there is found the same identification of the spirit with the *ukpon* or 'shadow,' for a man to lose which is fatal. There are thus found among the lower races not only the types of those familiar classic terms, the *skia* and *umbra,* but also what seems the fundamental thought of the stories of shadowless men still current in the folklore of Europe, and familiar to modern readers in Chamisso's tale of Peter Schlemihl. Thus the dead in Purgatory knew that Dante was alive when they saw that, unlike theirs, his figure cast a shadow on the ground. Other attributes are taken into the notion of soul or spirit, with especial regard to its being the cause of life. Thus the Caribs, connecting the pulses with spiritual beings, and especially considering that in the heart dwells man's chief soul, destined to a future heavenly life, could reasonably use the one word *iouanni* for 'soul, life, heart.' The Tongans supposed the soul to exist throughout the whole extension of the body, but particularly in the heart. On one occasion, the natives were declaring to a European that a man buried months ago was nevertheless still alive. 'And one, endeavouring to make me understand what he meant, took hold of my hand, and squeezing it, said: "This will die, but the life that is within you will never die;" with his other hand pointing to my heart.' So the Basutos say of a dead man that his heart is gone out, and of one recovering from sickness that his heart

is coming back. This corresponds to the familiar Old World view of the heart as the prime mover in life, thought, and passion. The connexion of soul and blood, familiar to the Karens and Papuas, appears prominently in Jewish and Arabic philosophy. To educated moderns the idea of the Macusi Indians of Guiana may seem quaint, that although the body will decay, 'the man in our eyes' will not die, but wander about. Yet the association of personal animation with the pupil of the eye is familiar to European folklore, which not unreasonably discerned a sign of bewitchment or approaching death in the disappearance of the image, pupil, or baby, from the dim eyeballs of the sick man. . . . . E. B. TYLOR, *Primitive Culture*, 1:417–31 (John Murray, 1891).

[THE "GHOST-THEORY" OF THE ORIGIN OF RELIGION]

THE IDEAS OF SLEEP AND DREAMS

A conception which is made so familiar to us during education that we mistake it for an original and necessary one, is the conception of Mind, as an internal existence distinct from body. The hypothesis of a sentient, thinking entity, dwelling within a corporeal framework, is now so deeply woven into our beliefs and into our language, that we can scarcely imagine it to be one which the primitive man did not entertain, and could not entertain.

Yet if we ask what is given in experience to the untaught human being, we find that there is nothing to tell him of any such existence. From moment to moment he sees things around, touches them, handles them, moves them hither and thither. He knows nothing of sensations and ideas—has no words for them. Still less has he any such highly-abstract word or conception as consciousness. He thinks without observing that he thinks; and therefore never asks how he thinks, and what it is which thinks. His senses make him conversant only with objects externally existing, and with his own body; and he transcends his senses only far enough to draw concrete inferences respecting the actions of these objects. An invisible, intangible entity, such as Mind is supposed to be, is a high abstraction unthinkable by him, and inexpressible by his vocabulary.

This, which is obvious *a priori*, is verified *a posteriori*. The savage cannot speak of internal intuition, except in terms of external intuition. We ourselves, indeed, when saying that we *see* something that has been *clearly* explained, or *grasp* an argument *palpably* true, still express mental acts by words originally used to express bodily acts. And this use of words implying vision and touch, which with us is metaphorical, is, with the savage, not distinguished from literal. He symbolizes his mind by his eye. (See *Principles of Psychology*, § 404.)

But until there is a conception of Mind as an internal principle of activity, there can be no such conception of dreams as we have. To interpret the sights and sayings and doings we are conscious of during sleep, as activities of the thinking entity which go on while the senses are closed, is impossible until the thinking entity is postulated. Hence arises the inquiry—What explanation is given of dreams before the conception of Mind exists?

Hunger and repletion, both very common with the primitive man, excite dreams of great vividness. Now, after a bootless chase and a long fast, he lies exhausted; and, while slumbering, goes through a successful hunt—kills, skins, and cooks his prey, and suddenly wakes when about to taste the first morsel. To suppose him saying to himself—"It was all a dream," is to suppose him already in possession of that hypothesis which we see he cannot have. He takes the facts as they occur. With perfect distinctness he recalls the things he saw and the actions he performed; and he accepts undoubtingly the testimony of memory. True, he all at once finds himself lying still. He does not understand how the change took place; but, as we have lately seen, the surrounding world familiarizes him with unaccountable appearances and disappearances, and why should not this be one? If at another time, lying gorged with food, the disturbance of his circulation causes nightmare—if, trying to escape and being unable, he fancies himself in the clutches of a bear, and wakes with a shriek; why should he conclude that the shriek was not due to an actual danger? Though his squaw is there to tell him that she saw no bear, yet she heard his shriek; and like him has not the dimmest notion that a mere subjective state can produce

such an effect—has, indeed, no terms in which to frame such a notion.

The belief that dreams are actual experiences is confirmed by narrations of them in imperfect language. We forget that discriminations easy to us, are impossible to those who have but few words, all concrete in their meanings, and only rude propositional forms in which to combine these words. When we read that in the language of so advanced a people as the ancient Peruvians, the word *huaca* meant "idol, temple, sacred place, tomb, hill, figures of men and animals," we may judge how indefinite must be the best statements which the vocabularies of the rudest men enabled them to make. When we read of an existing South American tribe, that the proposition—"I am an Abipone," is expressible only in the vague way—"I, Abipone;" we cannot but infer that by such undeveloped grammatical structures, only the simplest thoughts can be rightly conveyed. When, further, we learn that among the lowest men inadequate words indefinitely combined are also imperfectly pronounced, as, for instance, among the Akka, whose speech struck Schweinfurth by its inarticulateness, we recognize a third cause of confusion. And thus prepared, we need feel no surprise on being told that the Zuni Indians require "much facial contortion and bodily gesticulation to make their sentences perfectly intelligible;" that the language of the Bushmen needs so many signs to eke out its meaning, that "they are unintelligible in the dark;" and that the Arapahos "can hardly converse with one another in the dark." If, now, remembering all this, we ask what must happen when a dream is narrated by a savage, we shall see that even supposing he suspects some distinction between ideal actions and real actions, he cannot express it. His language does not enable him to say—"I dreamt that I saw," instead of—"I saw." Hence each relates his dreams as though they were realities; and thus strengthens in every other, the belief that his own dreams are realities.

What then is the resulting notion? The sleeper on awaking recalls various occurrences, and repeats them to others. He thinks he has been elsewhere; witnesses say he has not; and their testimony is verified by finding himself where he was when he

went to sleep. The simple course is to believe both that he has remained and that he has been away—that he has two individualities, one of which leaves the other and presently comes back. He, too, has a double existence, like many other things.

From all quarters come proofs that this is the conception actually formed of dreams by savages, and which survives after considerable advances in civilization have been made. Here are a few of the testimonies.

Schoolcraft tells us that the North American Indians in general, think "there are duplicate souls, one of which remains with the body, while the other is free to depart on excursions during sleep;" and, according to Crantz, the Greenlanders hold "that the soul can forsake the body during the interval of sleep." The theory in New Zealand is "that during sleep the mind left the body, and that dreams are the objects seen during its wanderings;" and in Fiji, "it is believed that the spirit of a man who still lives will leave the body to trouble other people when asleep." Similarly in Borneo. It is the conviction of the Dyaks that the soul during sleep goes on expeditions of its own, and "sees, hears, and talks." Among Hill-tribes of India, such as the Karens, the same doctrine is held: their statement being that "in sleep it [the Là, spirit or ghost] wanders away to the ends of the earth, and our dreams are what the Là sees and experiences in his perambulations." By the ancient Peruvians, too, developed as was the social state they had reached, the same interpretation was put upon the facts. They held that "the soul leaves the body while it is sleeping. They asserted that the soul could not sleep, and that the things we dream are what the soul sees in the world while the body sleeps." And we are told the like even of the Jews: "Sleep is looked upon as a kind of death, when the soul departs from the body, but is restored again in awaking."

Occurring rarely, it may be, somnambulism serves, when it does occur, to confirm this interpretation. For to the uncritical, a sleep-walker seems to be exemplifying that activity during sleep, which the primitive conception of dreams implies. Each phase of somnambulism furnishes its evidence. Frequently the sleeper gets up, performs various actions, and returns to rest without waking; and, recalling afterwards these actions, is told

by witnesses that he actually did the things he thought he had been doing. What construction must be put on such an experience by primitive men? It proves to the somnambulist that he may lead an active life during his sleep, and yet find himself afterwards in the place where he lay down. With equal conclusiveness it proves to those who saw him, that men really go away during their sleep; that they do the things they dream of doing; and may even sometimes be visible. True, a careful examination of the facts would show that in this case the man's body was absent from its place of rest. But savages do not carefully examine the facts. Again, in cases where the sleep-walker does not recollect the things he did, there is still the testimony of others to show him that he was not quiescent; and occasionally there is more. When, as often happens, his night-ramble brings him against an obstacle and the collision wakes him, he has a demonstration of the alleged fact that he goes hither and thither during sleep. On returning to his sleeping-place he does not, indeed, find a second self there; but this discovery, irreconcilable with the accepted notion, simply increases the confusion of his ideas about these matters. Unable to deny the evidence that he wanders when asleep, he takes his strange experience in verification of the current belief, without dwelling on the inconsistency.

When we consider what tradition, with its exaggerations, is likely to make of these abnormal phenomena, now and then occurring, we shall see that the primitive interpretation of dreams must receive from them strong support.

Along with this belief there of course goes the belief that persons dreamt of were really met. If the dreamer thinks his own actions real, he ascribes reality to whatever he saw—place, thing, or living being. Hence a group of facts similarly prevalent.

Morgan states that the Iroquois think dreams real, and obey their injunctions—do what they are told by those they see in dreams; and of the Chippewas, Keating asserts that they fast for the purpose of "producing dreams, which they value above all things." The Malagasy "have a religious regard to dreams, and think that the good *dæmon* . . . . comes, and tells them in their dreams when they ought to do a thing, or to warn them of

some danger." The Sandwich Islanders say the departed member of a family "appears to the survivors sometimes in a dream, and watches over their destinies;" and the Tahitians have like beliefs. In Africa it is the same. The Congo people hold that what they see and hear in "dreams come to them from spirits;" and among East Africans, the Wanika believe that the spirits of the dead appear to the living in dreams. The Kaffirs, too, "seem to ascribe dreams in general to the spirits." Abundant evidence is furnished by Bishop Callaway concerning the Zulus, whose ideas he has written down from their own mouths. Intelligent as these people are, somewhat advanced in social state, and having language enabling them to distinguish between dream-perceptions and ordinary perceptions, we nevertheless find among them (joined with an occasional scepticism) a prevalent belief that the persons who appear in dreams are real. Out of many illustrations, here is one furnished by a man who complains that he is plagued by the spirit of his brother. He tells his neighbours: "'I have seen my brother.' They ask what he said. He says, 'I dreamed that he was beating me, and saying, "How is it that you do no longer know that I am?" I answered him, saying, "When I do know you, what can I do that you may see I know you? I know that you are my brother." He answered me as soon as I said this, and asked, "When you sacrifice a bullock, why do you not call upon me?" I replied, "I do call on you, and laud you by your laud-giving names. Just tell me the bullock which I have killed, without calling on you. For I killed an ox, I called on you; I killed a barren cow, I called on you." He answered, saying, "I wish for meat." I refused him, saying, "No, my brother, I have no bullock; do you see any in the cattle-pen?" He replied, "Though there be but one, I demand it." When I awoke, I had a pain in my side.'"

Though this conception of a dead brother as a living being who demands meat, and inflicts pain for non-compliance, is so remote from our own conceptions as to seem scarcely possible; yet we shall see its possibility on remembering how little it differs from the conceptions of early civilized races. At the opening of the second book of the Iliad, we find the dream sent by Zeus to mislead the Greeks, described as a real person receiving from

Zeus's directions what he is to say to the sleeping Agamemnon. In like manner, the soul of Patroclus appeared to Achilles when asleep "in all things like himself," saying "bury me soon that I may pass the gates of Hades," and, when grasped at, "like smoke vanished with a shriek:" the appearance being accepted by Achilles as a reality, and its injunction as imperative. Hebrew writings show us the like. When we read that "God came to Abimelech in a dream by night," that "the Lord came, and stood, and called as at other times, Samuel, Samuel;" we see an equally unhesitating belief in an equally objective reality. During civilization this faith has been but slowly losing ground, and even still survives; as is proved by the stories occasionally told of people who when just dead appeared to distant relations, and as is proved by the superstitions of the "spiritualists."

Indeed, after recalling these last, we have but to imagine ourselves de-civilized—we have but to suppose faculty decreased, knowledge lost, language vague, and scepticism absent, to understand how inevitably the primitive man conceives as real, the dream-personages we know to be ideal. . . . .

Like every child, the primitive man passes through a phase of intelligence during which there has not yet arisen the power of introspection implied by saying—"I think—I have ideas." The thoughts that accompany sensations and the perceptions framed of them, are so unobtrusive, and pass so rapidly, that they are not noticed: to notice them implies a self-criticism impossible at the outset. But these faint states of consciousness which, during the day, are obscured by the vivid states, become obtrusive at night, when the eyes are shut and the other senses dulled. Then the subjective activities clearly reveal themselves, as the stars reveal themselves when the sun is absent. That is to say, dream-experiences necessarily precede the conception of a mental self; *and are the experiences out of which the conception of a mental self eventually grows.* Mark the order of dependence: The current interpretation of dreams implies the hypothesis of mind as a distinct entity; the hypothesis of mind as a distinct entity cannot exist before the experiences suggesting it; the experiences suggesting it are the dream-experiences, which seem to imply two entities; and originally the supposition is that the

second entity differs from the first simply in being absent and active at night while the other is at rest. Only as this assumed duplicate becomes gradually modified by the dropping of physical characters irreconcilable with the facts, does the hypothesis of a mental self, as we understand it, become established.

Here, then, is the germinical principle which sets up such organization as the primitive man's random observations of things can assume. This belief in another self belonging to him, harmonizes with all those illustrations of duality furnished by things around; and equally harmonizes with those multitudinous cases in which things pass from visible to invisible states and back again. Nay more. Comparison shows him a kinship between his own double and the doubles of other objects. For have not these objects their shadows? Has not he too his shadow? Does not his shadow become invisible at night? Is it not obvious, then, that this shadow which in the day accompanies his body is that other self which at night wanders away and has adventures? Clearly, the Greenlanders who, as we have seen, believe this, have some justification for the belief.

THE IDEAS OF ANOTHER LIFE

One of the experiences suggesting another life, is also one of the experiences suggesting a limit to it; namely, the appearance of the dead in dreams. Sir John Lubbock has been, I believe, the first to point out this. Manifestly the dead persons recognized in dreams, must be persons who were known to the dreamers; and consequently, the long dead, ceasing to be dreamt of, cease to be thought of as still existing. Savages who, like the Manganjas, "expressly ground their belief in a future life on the fact that their friends visit them in their sleep;" naturally draw the inference that when their friends cease to visit them in their sleep, they have ceased to be. Hence the contrast which Sir John Lubbock quotes from Du Chaillu. Ask a negro "where is the spirit of his great-grandfather, he says he does not know; it is done. Ask him about the spirit of his father or brother who died yesterday, then he is full of fear and terror." And as we shall hereafter see, when dealing with another question, the evidence furnished by dreams establishes in the minds of the Ama-

zulu, a like marked distinction between the souls of the lately dead and the souls of the long dead; which they think have died utterly.

How the notion of a temporary after-life grows into the notion of an enduring after-life, we must leave unconsidered. For present purposes it suffices to point out that the notion of an enduring after-life is reached through stages.

What is the character of this after-life: here believed in vaguely and in a variable way; here believed in as lasting for a time; here believed in as permanent?

Sundry of the funeral rites described in a foregoing chapter, imply that the life which goes on after death is supposed to differ in nothing from this life. The Chinooks assert that at night the dead "awake and get up to search for food." No doubt it is with a like belief in the necessity for satisfying their material wants, that the Comanches think the dead "are permitted to visit the earth at night, but must return at daylight"—a superstition reminding us of one still current in Europe. Among South American tribes, too, the second life is conceived as an unvaried continuation of the first: death being, as the Yucatan Indians say, "merely one of the accidents of life." The Tupis buried the dead body in the house "in a sitting posture with food before it; for there were some who believed that the spirit went to sport among the mountains, and returned there to eat and to take rest."

Where the future life is thought of as divided from the present by a more decided break, we still find it otherwise contrasted in little or nothing. What is said of the Fijians may be said of others. After death they "plant, live in families, fight, and in short do much as people in this world." Let us note the general agreement on this point.

The provisions they count upon, differ from the provisions they have been accustomed to, only in being better and more abundant. The Innuits expect to feast on reindeer-meat; after death the Creek goes where "game is plenty and goods very cheap, where corn grows all the year around and the springs of pure water are never dried up;" the Comanches look forward to hunting buffaloes which are "abundant and fat;" while the Patagonians hope "to enjoy the happiness of being eternally drunk." The

conception differs elsewhere only as the food, etc., differs. The people of the New Hebrides believe that in the next life "the cocoanuts and the bread-fruit are finer in quality, and so abundant in quantity as never to be exhausted." Arriaga says that the Peruvians "do not know, either in this life or in the other, any greater happiness than to have a good farm wherefrom to eat and to drink." And pastoral peoples show a kindred adjustment of belief: the Todas think that after death their buffaloes join them, to supply milk as before.

With like food and drink there go like occupations. The Tasmanians expected "to pursue the chase with unwearied ardour and unfailing success." Besides killing unlimited game in their heaven, the Dakotahs look forward to "war with their former enemies." And, reminded as we thus are of the daily fighting and feasting anticipated by the Scandinavians, we are shown the prevalence of such ideas among peoples remote in habitat and race. To see how vivid these ideas are, we must recall the observances they entail.

Books of travel have familiarized most readers with the custom of burying a dead man's movables with him. This custom elaborates as social development goes through its earlier stages. Here are a few illustrations, joined with the constructions we must put upon them.

The dead savage, having to hunt and to fight, must be armed. Hence the deposit of weapons and implements with the corpse. The Tongous races have these, with other belongings, "placed on their grave, to be ready for service the moment they awake from what they consider to be their temporary repose." And a like course is followed by the Kalmucks, the Esquimaux, the Iroquois, the Araucanians, the Inland Negroes, the Nagas, and by tribes, savage and semi-civilized, too numerous to mention: some of whom, too, recognizing the kindred needs of women and children, bury with women their domestic appliances and with children their toys.

Logically developed, the primitive belief implies . . . . that the deceased will need not only his weapons and implements, his clothing, ornaments, and other movables, together with his domestic animals; but also that he will want human companionship an!

services. The attendance he had before death must be renewed after death.

Hence the immolations which have prevailed, and still prevail, so widely. The custom of sacrificing wives, and slaves, and friends, develops as society advances through its earlier stages, and the theory of another life becomes more definite. Among the Fuegians, the Andamanese, the Australians, the Tasmanians, with their rudimentary social organizations, wives are not killed to accompany dead husbands; or if they are, the practice is not general enough to be specified in the accounts given of them. But it is a practice shown us by more advanced peoples: in Polynesia, by the New Caledonians, by the Fijians, and occasionally by the less barbarous Tongans—in America, by the Chinooks, the Caribs, the Dakotahs—in Africa, by the Conga people, the Inland Negroes, the Coast Negroes, and most extensively by the Dahomans. To attend the dead in the other world, captives taken in war are sacrificed by the Caribs, the Dakotahs, the Chinooks; and without enumerating the savage and semi-savage peoples who do the like, I will only further instance the survival of the usage among the Homeric Greeks, when slaying (though with another assigned motive) twelve Trojans at the funeral pyre of Patroclus. Similarly with domestics: a dead man's slaves are slain by the Kyans and the Milanaus of Borneo; the Zulus kill a king's valets; the Inland Negroes kill his eunuchs to accompany his wives; the Coast Negroes poison or decapitate his confidential servants. Further, there is in some cases an immolation of friends. In Fiji, a leading man's chief friend is sacrificed to accompany him; and among the sanguinary peoples of tropical Africa, a like custom exists.

ANCESTOR-WORSHIP IN GENERAL

. . . . Where the levels of mental nature and the social progress are lowest, we usually find, along with an absence of religious ideas generally, an absence of, or very slight development of, ancestor-worship. A typical case is that of the Juángs, a wild tribe of Bengal, who, described as having no word for god, no idea of a future state, no religious ceremonies, are also said to "have no notion of the worship of ancestors." Cook, telling us what the

Fuegians were before contact with Europeans had introduced foreign ideas, said there were no appearances of religion among them; and we are not told by him or others that they were ancestor-worshippers. So far as the scanty evidence may be trusted, the like seems to be the case with the Andamanese. And though believing in ghosts, the Australians and Tasmanians show us but little persistence in ghost-propitiation. Among the Veddahs, indeed, though extremely low, an active if simple ancestor-worship prevails; but here, contact with the more advanced Cingalese has probably been a factor.

When, however, instead of wandering groups who continually leave far behind the places where their members lie buried, we come to settled groups whose burial-places are in their midst, and among whom development of funeral rites is thus made possible, we find that continued propitiation of dead relatives becomes an established practice. All varieties of men show us this. Taking first the Negrito races, we read that "with the Fijians, as soon as beloved parents expire, they take their place amongst the family gods. Bures, or temples, are erected to their memory." Of the Tannese, we learn that "their general name for gods seems to be *aremha;* that means a dead man." And the like is told us of other New Caledonian peoples. With the Malayo-Polynesians it is the same; save that with simple ancestor-worship there usually coexists a more developed worship of remoter ancestors, who have become deities. Sacrificing to their gods, the Tahitians also sacrifice to the spirits of departed chiefs and kindred. Similar statements are made respecting the Sandwich Islanders, the Samoans, the Malagasy, and the Sumatrans; of which last people Marsden says, that though "they neither worship god, devil, nor idol," yet they "venerate almost to the point of worshipping, the tombs and *manes* of their deceased ancestors." The like holds in Africa. The people of Angola "are constantly deprecating the wrath of departed souls;" and the Bambiri "pray to departed chiefs and relatives." So by the Kaffirs the spirits of the dead "are elevated in fact to the rank of deities." And parallel accounts are given of the Balonda, the Wanika, and the Congoese. Quite different though they are in type, the lower Asiatic races yield us allied illustrations. Of

the Bhils, of the Bghais, of the Karens, of the Khonds, we find ancestor-worship alleged. The Santals' religion "is based upon the family," and "in addition to the family-god, each household worships the ghosts of its ancestors." And were there any doubt about the origin of the family-god, it would be removed by Macpherson's statement respecting the Khonds—"The more distinguished fathers of the tribe, of its branches, or of its subdivisions, are all remembered by the priests, their sanctity growing with the remoteness of the period of their deaths." Of Northern Asiatics, the Kirghiz and the Ostyaks yield further examples; and the Turkomans were lately instanced as showing how this worship of the dead survives along with a nominal monotheism. Then, crossing over into America, the like phenomena are found from the extreme North to the uttermost South —from the Esquimaux to the Patagonians: reaching, as we have seen, very elaborate developments among the ancient civilized races.

How ancestor-worship prevailed, and was greatly elaborated, among the people who, in the Nile valley, first carried civilization to a high stage, has been already shown. How, in the far East, another vast society which had reached considerable heights of culture while Europe was covered by barbarians, has practised, and still practises, ancestor-worship, scarcely needs saying. And that it has all along characterized the Hindu civilization is also a fact, though a fact less familiar. With the highly-developed religious systems of India, there coexists a daily re-genesis of deities from dead men. Sir A. C. Lyall says: "So far as I have been able to trace back the origin of the best-known minor provincial deities, they are usually men of past generations who have earned special promotion and brevet rank among disembodied ghosts by some peculiar acts or incidents of their lives or deaths. . . . . The Bunjâras, a tribe much addicted to highway robbery, worship a famous bandit. . . . . M. Raymond, the French commander, who died at Hyderabad, has been there canonized after a fashion. . . . . Of the numerous local gods known to have been living men, by far the greater proportion derive from the ordinary canonization of holy personages. . . . . The number of shrines thus raised in Berar alone to these anchorites and per-

sons deceased in the odour of sanctity is large, and it is constantly increasing. Some of them have already attained the rank of temples." . . . .

Taking the aggregate of human peoples—tribes, societies, nations—we find that nearly all of them, if not literally all, have a belief, vague or distinct, in a reviving other-self of the dead man. Within this class of peoples we find a class not quite so large, by the members of which the other-self of the dead man is supposed to exist for a time, or always, after death. Nearly as numerous is the class of peoples included in this, who show us ghost-propitiation at the funeral, and for a subsequent interval. Then comes the narrower class contained in the last—those more advanced peoples who, along with the belief in a ghost which permanently exists, show us a persistent ancestor-worship. Again, somewhat further restricted, though by no means small, we have a class of peoples whose worship of distinguished ancestors partially subordinates that of the undistinguished. And eventually, the subordination growing more decided, becomes marked where these distinguished ancestors were leaders of conquering races.

Even the words applied in more advanced societies to different orders of supernatural beings, indicate by their original community of meaning, that this has been the course of genesis. The fact cited above, that among the Tannese the word for a god means literally a dead man, is typical of facts everywhere found. Ghost, spirit, demon—names at first applied to the other-self without distinctions of character—come to be differently applied as ascribed differences of character arise: the shade of an enemy becomes a devil, and a friendly shade becomes a divinity. Where the conceptions have not developed far, there are no differentiated titles, and the distinctions made by us cannot be expressed. The early Spanish missionaries in America were inconvenienced by finding that the only native word they could use for God also meant devil. In Greek, δαιμων and θεός are interchangeable. By Æschylus, Agamemnon's children are represented as appealing to their father's ghost as to a god. So, too, with the Romans. Besides the unspecialized use of *dæmon*, which means an angel or genius, good or bad, we find the unspecialized use of *deus* for

god and ghost. On tombs the *manes* were called gods; and a law directs that "the rights of the *manes*-gods are to be kept sacred." Similarly with the Hebrews. Isaiah, representing himself as commanded to reject it, quotes a current belief implying such identification:—"And when they say unto you, 'Consult the ghost-seers and the wizards that chirp and that mutter! Should not people consult their gods even the dead on behalf of the living?'" When Saul goes to question the ghost of Samuel, the expression of the enchantress is—"I saw gods [*elohim*] ascending out of the earth:" god and ghost being thus used as equivalents. Even in our own day the kinship is traceable. The statement that God is a spirit, shows the application of a term which, otherwise applied, signifies a human soul. Only by its qualifying epithet is the meaning of Holy Ghost distinguished from the meaning of ghost in general. A divine being is still denoted by words that originally meant the breath which, deserting a man's body at death, was supposed to constitute the surviving part.

Do not these various evidences warrant the suspicion that from the ghost, once uniformly conceived, have arisen the variously-conceived supernatural beings? We may infer, *a priori*, that in conformity with the law of Evolution, there will develope many unlike conceptions out of conceptions originally alike. The spirits of the dead, forming in a primitive tribe, an ideal group the members of which are but little distinguished from one another, will grow more and more distinguished. As societies advance, and as traditions, local and general, accumulate and complicate, these once-similar human souls acquiring in the popular mind differences of character and importance, will diverge; until their original community of nature becomes scarcely recognizable. . . . .

ANIMAL-WORSHIP

The belief that human beings disguise themselves as brutes, is in some cases specified generally; as concerning the Thlinkeets, who "will kill a bear only in case of great necessity, for the bear is supposed to be a man that has taken the shape of an animal." And the converse idea in its general form occurs among

the Karens, who think "the waters are inhabited by beings whose proper form is that of dragons [? crocodiles], but that occasionally appear as men, and who take wives of the children of men." Usually, however, only persons distinguished by power of some kind, or believed to be so, have this ability ascribed to them.

Regarding all special skill as supernatural, sundry African peoples think the blacksmith (who ranks next to the medicine-man) works by spirit-agency; and in Abyssinia, "blacksmiths are supposed able to turn themselves into hyænas and other animals." So strong is this belief that it infects even European residents: Wilkinson instances a traveller who asserted that he had seen the metamorphosis. More commonly it is the sorcerers exclusively of whom this power is alleged. The Khonds believe "witches have the faculty of transforming themselves into tigers." In case of "an alligator seizing upon a child whilst bathing in the river, or a leopard carrying off a goat," the Bulloms "are of opinion that it is not a real leopard or alligator which has committed the depredation, but a witch under one of these assumed forms." Among the Mexicans "there were sorcerers and witches who were thought to transform themselves into animals." In Honduras they "punish sorcerers that did mischief; and some of them are said to have ranged on the mountains like tigers or lions, killing men, till they were taken and hanged." And the Chibchas "pretended to have great sorcerers who might be transformed into lions, bears, and tigers, and devour men like these animals." To chiefs, as well as to sorcerers, this faculty is in some places ascribed. The Cacique Thomagata, one of the Chibcha rulers, was believed "to have had a long tail, after the manner of a lion or a tiger, which he dragged on the soil." Africa, too, yields evidence.

"There are also a great many lions and hyænas, and there is no check upon the increase of the former, for the people, believing that the souls of their chiefs enter into them, never attempt to kill them; they even believe that a chief may metamorphose himself into a lion, kill any one he chooses, and then return to the human form; therefore, when they see one they commence clapping their hands, which is the usual mode of salutation." In some cases this supposed power is shared by the chief's rela-

tives. Schweinfurth, when at Gallabat, having shot a hyæna, was reproached by the sheikh because his, the sheik's, mother, was a "hyæna-woman."

Instead of change of form there is, in other cases, possession. We saw how the primitive dream-theory, with its wandering double which deserts the body and re-enters it, brings, among many sequences, the belief that wandering doubles can enter other bodies than their own; and the last chapter exhibited some wide extensions of this doctrine: representative figures, and even inanimate objects not having human shapes, being supposed permeable by human ghosts. Naturally, then, animals are included among the things men's souls go into. At Tete, in Africa, the people believe "that while persons are still living they may enter into lions and alligators, and then return again to their own bodies;" and the Guiana tribes think some jaguars "are possessed by the spirits of men." . . .

"There are amatongo who are snakes," say the Zulus; and, as we have repeatedly seen, Amatongo is their name for ancestral ghosts. But why do these people think that snakes are transformed ancestors? Some extracts from Bp. Callaway's cross-examination, I place in an order which will prepare the reader for the answer.

"The snakes into which men turn are not many; they are distinct and well known. They are the black Imamba, and the green Imamba, which is called Inyandezulu. Chiefs turn into these. Common people turn into the Umthlwazi."

"These snakes are known to be human beings when they enter a hut; they do not usually enter by the doorway. Perhaps they enter when no one is there, and go to the upper part of the hut, and stay there coiled up."

"If the snake has a scar on the side, some one who knew a certain dead man of that place who also had such a scar, comes forward and says, 'It is So-and-so. Do you not see the scar on his side?" It is left alone, and they go to sleep."

"Those which are men are known by their frequenting huts, and by their not eating mice, and by their not being frightened at the noise of men." . . . .

All over the world there prevails the idea that the ghost of

the dead man haunts the old home. What, then, is meant by the coming of these snakes into the huts? Are they not returned relations? Do not the individual marks they sometimes bear yield proof? Just as an Australian settler who had a bent arm, was concluded to be the other-self of a dead native who had a bent arm; so here, the scar common to the man and the snake proves identity. When, therefore, the Zulus say—"Neither does a snake that is an Itongo excite fear in men. . . . When men see it, it is as though it said as they look at it, 'Be not afraid. It is I';" we are shown that recognition of the snake as a human being, come back in another shape, is suggested by several circumstances: frequentation of the house being the chief. . . . .

Among the Amazulu, belief in the return of ancestors disguised as serpents, has not led to worship of serpents as such: propitiation of them is mingled with propitiation of ancestral ghosts in an indefinite way. Other peoples, too, present us with kindred ideas, probably generated in like manner, which have not assumed distinctly religious forms; as witness the fact that "in the province of Culiacan tamed serpents were found in the dwellings of the natives, which they feared and venerated." But, carrying with us the clue thus given, we find that along with a developed cult and advanced arts, a definite serpent-worship results. Ophiolatry prevails especially in hot countries; and in hot countries certain kinds of ophidia secrete themselves in dark corners of rooms, and even in beds. India supplies us with a clear case. Serpent-gods are there common; and the serpent habitually sculptured as a god, is the cobra. Either in its natural form or united to a human body, the cobra with expanded hood in attitude to strike, is adored in numerous temples. And then, on inquiry, we learn that the cobra is one of the commonest intruders in houses. Yet another instance is furnished by the Egyptian asp, a species of cobra. Figuring everywhere as this does in their sacred paintings and sculptures, we find that, greatly reverenced throughout Egypt, it was a frequenter of gardens and houses, and was so far domesticated that it came at a signal to be fed from the table.

The like happens with other house-haunting creatures. In many countries lizards are often found indoors; and among the

Amazulu, the "Isalukazana, a kind of lizard," is the form supposed to be taken by old women. The New Zealanders believe that the spirits of their ancestors re-visit them as lizards; and I learn from a colonist that these are lizards which enter houses. Certain Russian foresters, again, "cherish, as a kind of household gods, a species of reptile, which has four short feet like a lizard, with a black flat body. . . . . These animals are called 'givoites,' and on certain days are allowed to crawl about the house in search of the food which is placed for them. They are looked upon with great superstition." Then, too, we have the wasp, which is one of the animal-shapes supposed to be assumed by the dead among the Amazulu; and the wasp is an insect which often joins the domestic circle to share the food on the table. Alongside this belief I may place a curious passage from the flood-legend of the Babylonians. Hasisadra, describing his sacrifice after the deluge, says—"The gods collected at its burning, the gods collected at its good burning; the gods, like flies, over the sacrifice gathered." Once more, of house-haunting creatures similarly regarded, we have the dove. Describing animal-worship among the ancients, Mr. M'Lennan remarks that "the dove, in fact . . . . was almost as great a god as the serpent." The still-extant symbolism of Christianity shows us the surviving effect of this belief in the ghostly character of the dove.

By most peoples the ghost is believed now to re-visit the old home, and now to be where the body lies. If, then, creatures which frequent houses are supposed to be metamorphosed ancestors, will not creatures habitually found with corpses be also considered as animal-forms assumed by the dead? That they will, we may conclude; and that they are, we have proofs.

The prevalence of cave-burial among early peoples everywhere, has been shown. What animals commonly occur in caves? Above all others, those which shun the light—bats and owls. Where there are no hollow trees, crevices and caverns are the most available places for these night-flying creatures; and often in such places they are numerous. An explorer of the Egyptian cave known from its embalmed contents as "Croco-

dilopolis," tells me that he was nearly suffocated with the dust raised by bats, the swarms of which nearly put out the torches. Now join with these statements the following passage from the Izdubar legend translated by Mr. Smith:—"Return me from Hades, the land of my knowledge; from the house of the departed, the seat of the god Irkalla; from the house within which is no exit; from the road the course of which never returns; from the place within which they long for light—the place where dust is their nourishment and their food mud. Its chiefs also, like birds, are clothed with wings." . . . .

Before dealing with supposed transformations of a third kind, like the above as identifying animals with deceased men, but unlike them as being otherwise suggested, two explanatory descriptions are needed: one of primitive language and the other of primitive naming.

The savage has a small vocabulary. Consequently, of the things and acts around, either but few can have signs, or those signs must be indiscriminately applicable to different things and acts: whence inevitable misunderstandings. If, as Burton says of the Dacotahs, "colours are expressed by a comparison with some object in sight," an intended assertion about a colour must often be taken for an assertion about the illustrative object. If, as Schweinfurth tells us of the Bongo dialect, one word means either "shadow" or "cloud," "rain" or "the sky," another "night" or "to-day;" the interpretations of statements must be in part guessed at, and the guesses must often be wrong. Indefiniteness, implied by this paucity of words, is further implied by the want of terms expressing degree. A Damara cannot understand the question whether of two stages the next is longer than the last. The question must be—"The last stage is little; the next, is it great?" and the only reply is—"It is so," or "It is not so." In some cases, as among the Abipones, superlatives are expressed by raising the voice. And then the uncertainties of meaning which such indefinitenesses cause, are made greater by the rapid changes in primitive dialects. Superstitions lead to frequent substitutions of new words for those previously in use; and hence statements current in one generation, otherwise expressed in the next, are misconstrued. Incoherence adds to the

confusion. In the aboriginal languages of South Brazil, "there are no such things as declensions and conjugations, and still less a regular construction of the sentences. They always speak in the infinitive, with, or mostly without, pronouns or substantives. The accent, which is chiefly on the second syllable, the slowness or quickness of pronunciation, certain signs with the hand, the mouth, or other gestures, are necessary to complete the sense of the sentence. If the Indian, for instance, means to say, 'I will go into the wood,' he says *'Wood-go:'* pushing out his mouth to indicate the quarter which he intends to visit." Clearly, no propositions that involve even moderate degrees of discrimination, can be communicated by such people. The relative homogeneity of early speech, thus implied by the absence of modifying terminations to words or the auxiliaries serving in place of them, is further implied by the absence of general and abstract words. Even the first grades of generality and abstractness are inexpressible. Both the Abipones and the Guaranis "want the verb substantive to be. They want the verb to have. They have no words whereby to express man, body, God, place, time, never, ever, everywhere." Similarly, the Koossa language has "no proper article, no auxiliary verbs, no inflections either of their verbs or substantives. . . . . The simple abstract proposition, *I am,* cannot be expressed in their language."

Having these *a posteriori* verifications of the *a priori* inference, that early speech is meagre, incoherent, indefinite, we may anticipate countless erroneous beliefs caused by misapprehensions. Dobrizhoffer says that among the Guaranis, *"Aba che* has three meanings—I am a *Guarani,* I am a *man,* or I am a *husband;* which of these is meant must be gathered from the tenor of the conversation." On asking ourselves what will happen with traditions narrated in such speech, we must answer that the distortions will be extreme and multitudinous.

Proper names were not always possessed by men: they are growths. It never occurred to the uninventive savage to distinguish this person from that by vocal marks. An individual was at first signified by something connected with him, which, when mentioned, called him to mind—an incident, a juxta-position, a personal trait.

A descriptive name is commonly assumed to be the earliest. We suppose that just as objects and places in our own island acquired their names by the establishment of what was originally an impromptu description; so, names of savages, such as "Broad face," "Head without hair," "Curly head," "Horse-tail," are the significant *sobriquets* with which naming begins. But it is not so. Under pressure of the need for indicating a child while yet it has no peculiarities, it is referred to in connexion with some circumstances attending its birth. The Lower Murray Australians derive their names either from some trivial occurrence, from the spot where they were born, or from a natural object seen by the mother soon after the birth of the child. This is typical. Damara "children are named after great public incidents." "Most Bodo and Dhimáls bear meaningless designations, or any passing event of the moment may suggest a significant term." The name given to a Kaffir child soon after birth, "usually refers to some circumstance connected with that event, or happening about the same time." Among the Comanches, "the children are named from some circumstance in tender years;" and the names of the Chippewayan boys are "generally derived from some place, season, or animal." Even with so superior a type as the Bedouins, the like happens: "a name is given to the infant immediately on his birth. The name is derived from some trifling accident, or from some object which has struck the fancy of the mother or any of the women present at the child's birth. Thus, if the dog happened to be near on this occasion, the infant is probably named *Kelab* (from *Kelb,* a dog)."

This vague mode of identification, which arises first in the history of the race, and long survives as a birth-naming, is by-and-by habitually followed by a re-naming of a more specific kind: a personal trait that becomes decided in the course of growth, a strange accident, or a remarkable achievement, furnishing the second name. Among the peoples above mentioned, the Comanches, the Damaras, the Kaffirs illustrate this. Speaking of the Kaffirs, Mann says—"Thus 'Umgodi' is simply 'the boy who was born in a hole.' That is a birth name. 'Umginquisago' is 'the hunter who made the game roll over.' That is a name of renown." Omitting multitudinous illustrations, let us

note some which immediately concern us. Of the additional names gained by the Tupis after successes in battle, we read—"They selected their appellations from visible objects, pride or ferocity influencing their choice:" whence obviously results naming after savage animals. Among animal-names used by the Karens are—'Tiger,' 'Yellow-Tiger,' 'Fierce-Tiger,' 'Gaur,' 'Goat-antelope,' 'Horn-bill,' 'Heron,' 'Prince-bird,' and 'Mango-fish:' the preference for the formidable beast being obvious. In New Zealand a native swift of foot is called 'Kawaw,' a bird or fowl; and the Dacotah women have such names as the 'White Martin,' the 'Young Mink,' the 'Musk-rat's Paw.' All over the world the nicknaming after animals is habitual. Lander speaks of it among the Yorubans; Thunberg, among the Hottentots; and that it prevails throughout North America every one knows. As implied in cases above given, self-exaltation is sometimes the cause, and sometimes exaltation by others. When a Makololo chief arrives at a village, the people salute him with the title, 'Great Lion.' King Koffi's attendants exclaim—"Look before thee, O Lion." In the Harris papyrus, King Mencheper-ra (Tothmes III) is called 'the Furious Lion;' and the name of one of the kings of the second Egyptian dynasty, Kakau, means "the bull of bulls." In early Assyrian inscriptions we read—"Like a bull thou shalt rule over the chiefs;" a simile which, as is shown in another case, readily passes into metaphor. Thus in the third Sallier papyrus it is said of Rameses—"As a bull, terrible with pointed horns he rose;" and then in a subsequent passage the defeated address him—"Horus, conquering bull."

Remembering that this habit survives among ourselves, so that the cunning person is called a fox, the rude a bear, the hypocritical a crocodile, the dirty a pig, the keen a hawk, and so on—observing that in those ancient races who had proper names of a developed kind, animal-nicknaming still prevailed; let us ask what resulted from it in the earliest stages.

Verbal signs being at first so inadequate that gesture-signs are needful to eke them out, the distinction between metaphor and fact cannot be expressed, much less preserved in tradition. If, as shown by instances Mr. Tylor gives, even the higher races confound the metaphorical with the literal—if the statement in

the Koran that God opened and cleansed Mahomet's heart, originates a belief that his heart was actually taken out, washed, and replaced—if from accounts of tribes without governors, described as without heads, there has arisen among civilized people the belief that there are races of headless men; we cannot wonder if the savage, lacking knowledge and speaking a rude language, gets the idea that an ancestor named "the Tiger" was an actual tiger. From childhood upwards he hears his father's father spoken of by this name. No one suspects he will misinterpret it: error being, indeed, a general notion the savage has scarcely reached. And there are no words serving to convey a correction, even if the need is percieved. Inevitably, then, he grows up believing that his father descended from a tiger—thinking of himself as one of the tiger stock. Everywhere the results of such mistakes meet us. . . . .

Naturally, as a further sequence, there comes a special regard for the animal which gives the tribal name, and is considered a relative. As the ancestor conceived under the human form is thought able to work good or ill to his descendants, so, too, is the ancestor conceived under the brute-form. Hence "no Indian tracing his descent from the spirit mother and the grizzly . . . . will kill a grizzly bear." The Osages will not destroy the beaver: believing themselves derived from it. "A tribe never eats of the animal which is its namesake," among the Bechuanas. Like ideas and practices occur in Australia in a less settled form. "A member of the family will never kill an animal of the species to which his kobong [animal-namesake] belongs, should he find it asleep; indeed, he always kills it reluctantly, and never without affording it a chance of escape." Joined with this regard for the animal-namesake considered as a relative, there goes belief in its guardianship; and hence arises the faith in omens derived from birds and quadrupeds. The ancestor under the brute form, is supposed to be solicitous for the welfare of his kindred; and tells them by signs or sounds of their danger.

Do we not in these observances see the beginnings of a worship? If the East Africans think the souls of departed chiefs enter into lions and render them sacred; we may conclude that sacredness will equally attach to the animals whose human

souls were ancestral. If the Congo people, holding this belief about lions, think "the lion spares those whom he meets, when he is courteously saluted;" the implication is that there will arise propitiations of the beast-chief who was the progenitor of the tribe. Prayers and offerings may be expected to develop into a cult, and the animal-namesake into a deity.

When, therefore, among American Indians, whose habit of naming after animals still continues, and whose legends of animal-progenitors are so specific, we find animals taking rank as creators and divinities—when we read that "'raven' and 'wolf' are the names of the two gods of the Thlinkeets, who are supposed to be the founders of the Indian race;" we have just the result to be anticipated. And when of this tribe we further read that "the Raven trunk is again divided into sub-clans, called the Frog, the Goose, the Sea-Lion, the Owl, and the Salmon," while "the Wolf family comprises the Bear, Eagle, Dolphin, Shark, and Alca;" we see that apotheosis under the animal form, follows the same course as apotheosis under the human form. In either case, more recent progenitors of sub-tribes are subordinate to the ancient progenitors of the entire tribe.

Guided by these various clues we may, I think, infer that much of the developed animal-worship of the ancient historic races, grew out of this misinterpretation of nick-names. Even now, among partially-civilized peoples, the re-genesis of such worship is shown us. In Ashantee certain of the king's attendants, whose duty it is to praise him, or "give him names," cry out among other titles—"Bore" (the name of a venomous serpent), "you are most beautiful, but your bite is deadly." As these African kings ordinarily undergo apotheosis—as this laudatory title "Bore," may be expected to survive in tradition along with other titles, and to be used in propitiations—as the Zulus, who, led by another suggestion, think dead men become snakes, distinguish certain venomous snakes as chiefs; we must admit that from this complimentary nickname of a king who became a god, may naturally grow up the worship of a serpent: a serpent who, nevertheless, had a human history. Similarly when we ask what is likely to happen from the animal-name by which the king is honoured in Madagascar. "God is gone to the west—

Radama is a mighty bull," were expressions used by the Malagasy women in their songs in praise of their king, who was absent on a warlike expedition. Here we have the three titles simultaneously applied—the god, the king, the bull. If, then, the like occurred in ancient Egypt—if the same papyrus which shows us Rameses II invoking his divine ancestor, also contains the title "conquering bull," given to Rameses by the subjugated—if we find another Egyptian king called "a resolute Bull, he went forward, being a Bull king, a god manifest the day of combats;" can we doubt that from like occurrences in earlier times arose the worship of Apis? Can we doubt that Osiris-Apis was an ancient hero-king, who became a god, when, according to Brugsch, the Step-pyramid, built during the first dynasty, "concealed the bleached bones of bulls and the inscriptions chiselled in the stone relating to the royal names of the Apis," and, as he infers, "was a common sepulchre of the holy bulls:" reincarnations of this apotheosized hero-king? Can we doubt that the bovine deities of the Hindus and Assyrians similarly originated?

So that misinterpretations of metaphorical titles, which inevitably occur in early speech, being given, the rise of animal-worship is a natural sequence. Mammals, birds, reptiles, fishes, all yield nicknames; are all in one place or other regarded as progenitors; all acquire, among this or that people, a sacredness rising in many cases to adoration. Even where the nickname is one of reproach—even where the creature is of a kind to inspire contempt rather than respect, we see that identification with the ancestor explains worship of it. The Veddahs, who are predominantly ancestor-worshippers, also worship a tortoise. Though among them the reason is not traceable, we find an indication of it elsewhere. Mr. Bates, during his Amazon explorations, had two attendants surnamed Tortoise; and their surname had descended to them from a father whose slowness had suggested this nickname. Here we see the first step towards the formation of a tortoise tribe; having the tortoise for ancestor, totem deity. . . . .

We conclude, then, that in three ways is the primitive man led to identify the animal with the ancestor.

The other-self of the dead relative is supposed to come back occasionally to his old abode: how else is it possible for the survivors, sleeping there, to see him in their dreams? Here are creatures which commonly, unlike wild creatures in general, come into houses—come in, too, secretly in the night. The implication is clear. That snakes, which especially do this, are the returned dead, is inferred by peoples in Africa, Asia, and America: the haunting of houses being the common trait of the kinds of snakes reverenced or worshipped; and also the trait of certain lizards, insects, and birds similarly regarded.

The ghost sometimes re-visiting the house, is thought also to linger in the neighborhood of the corpse. Creatures found in caves used for burials, hence come to be taken for the new shapes assumed by departed souls. Bats and owls are conceived to be winged spirits; and from them arise the ideas of devils and angels.

Lastly, and chiefly, comes that identification of the animal with the ancestor, which is caused by interpreting metaphorical names literally. Primitive speech is unable to transmit to posterity the distinction between an animal and a person named after that animal. Hence the confusion of the two; hence the regard for the animal as progenitor; hence the growth of a worship. Besides explaining animal-gods, this hypothesis accounts for sundry anomalous beliefs—the divinities half-brute, half-human; the animals that talk, and play active parts in human affairs; the doctrine of metempsychosis, etc.

By modification upon modification, leading to complications and divergences without limit, evolution brings into being products extremely unlike their germs; and we here have an instance in this derivation of animal-worship from the propitiation of ghosts.

PLANT-WORSHIP

Plant-worship, ... like the worship of idols and animals, is an aberrant species of ancestor-worship—a species somewhat more disguised externally, but having the same internal nature. Though it develops in three different directions, there is but one origin.

The toxic excitements produced by certain plants, or by

extracts from them, or by their fermented juices, are classed with other excitements, as caused by spirits or demons. Where the stimulation is agreeable, the possessing spirit, taken in with the drug, is regarded as a beneficent being—a being sometimes identified with a human original and gradually exalted into a divinity who is lauded and prayed to.

Tribes that have come out of places characterized by particular trees or plants, unawares change the legend of emergence from them into the legend of descent from them: words fitted to convey the distinction not being contained in their vocabularies. Hence the belief that such trees are their ancestors; and hence the regard for them as sacred.

Further, the naming of individuals after plants becomes a cause of confusion. Identification of the two in tradition can be prevented only by the use of verbal qualifications that are impossible in rude languages; and from the unchecked indentification there arise ideas and sentiments respecting the plant-ancestor, allied to those excited by the animal-ancestor or the ancestor figured as human.

Thus the ghost-theory, supplying us with a key to other groups of superstitions, supplies us with a key to the superstitions constituting this group—superstitions otherwise implying gratuitous absurdities which we may not legitimately ascribe even to primitive men.

NATURE-WORSHIP

[Similarly] nature-worship, like each of the worships previously analyzed, is a form of ancestor-worship; but one which has lost, in a still greater degree, the external characters of its original.

Partly by confounding the parentage of the race with a conspicuous object marking the natal region of the race, partly by literal interpretation of birth-names, and partly by literal interpretation of names given in eulogy, there have been produced beliefs in descent from Mountains, from the Sea, from the Dawn, from animals which have become constellations, and from persons once on Earth who now appear as Moon and Sun. Implicitly believing the statements of forefathers, the savage and

semi-civilized have been compelled grotesquely to combine natural powers with human attributes and histories; and have been thus led into the strange customs of propitiating these great terrestrial and celestial objects by such offerings of food and blood as they habitually made to other ancestors.—HERBERT SPENCER, *Principles of Sociology*, 1:132–42, 181–87, 281–99, 322–46, 359, 384.

The savage attitude of mind indicated in the papers of Frazer, Jones, and Howitt should be taken as a starting-point in the explanation of the origin of religious belief. I am inclined to regard Jones's paper as the most important single statement on the nature of early religion.

Religion and magic are both attempts to control life, and they are both expressions of the power of abstraction and the attempt to determine cause and effect. They are the primitive philosophy. Theoretically magic and religion are separable and both must exist wherever the human mind exists. The examples cited in Frazer demonstrate the primitive belief that objects in juxtaposition, in an order of sequence, or having points of resemblance have also a causal connection. And this belief existed, and continues to exist in many of our modern superstitions, without any reference to religious belief. The belief that if you see the new moon "through brush" your life will be "obstructed" throughout the lunar month is an example of this.

But in addition, a mind which seeks explanations of mysteries and of incidents uncontrolled by human agency is forced to assume the presence of invisible personal agents, or spirits. Sleep, dreams, and death, as indicated by Spencer and Tylor, have a powerful influence in fixing the belief that some of these spirits are surviving souls, but the belief in invisible agency, and consequently in spirits, would exist if there were no such things as sleep, dreams, and death. Both magic and religion are expressions of the logical faculty of a mind working unscientifically.

But while theoretically separable, magic, religion, belief in ghosts, and belief in nature-spirits practically run into one another and become inextricably mingled. It is idle also to attempt to establish a priority in favor of any one of these elements. They are all expressions of the human mind, as soon as there is such a mind, and the dominance of one element or another is determined by the incidents of life and the operation of the attention.

Spencer's theory that ancestor-worship is the original form from which all others are derived has nothing in its favor except its admirable ingenuity. There are many classes of objects which cause the mind to speculate and to reach a belief in spirits. Death is one of these. But the sun, moon and stars, and the echoes, shadows, reflections and mutations of nature are other sets of objects operating in the same way. Reproduction, the renewal of life, the revival of the earth in the spring-time, and the consequent multiplication of food, both animal and vegetable, is one of the great mysteries, and leads to phallic worship. The animal was the focus of primitive man's attention, not only on account of its value, but because of its surpassing ability in its own field. The serpent's mysterious motion and its poison, and the intoxicating and poisonous qualities of the plant made them the objects of speculation and worship quite aside from any idea that they contained the spirits of dead ancestors. Spencer's statement that "bats and owls are conceived to be winged spirits; and from them arise the ideas of devils and angels," is an illustration of the extremity to which he is capable of pushing a theory. Angels and devils are images of good and evil, just as Lazarus and Dives are images of poverty and

wealth. The mind always attempts to associate its abstractions with pictures. Another palpable and particularistic error is Spencer's statement that "dream-experiences necessarily precede the conception of a mental self; and are the experiences out of which the conception of a mental self eventually grows." It is hardly necessary to say that if man were dreamless he would yet have arrived at the conception of a mental self.

On the other hand there are points of value in Spencer's essay. The confusion of thought arising in connection with names is an important consideration. It is even probable that this played a rôle in directing man's attention and worship to animals. But the animal itself must be regarded as capable of calling out man's attention and worship without regard to his filiation with it.

In a word, Spencer has singled out one branch of religion and made it the mother of all the others, whereas all sprang in common from the mind. Whether worship is directed toward ancestors, nature, animals, plants, or the symbols of reproduction, is a matter determined in the history of thought in particular regions. As a matter of fact all these elements usually enter, and frequently the rites attaching to different objects maintain themselves separately, in the same region.

Both the mental life and the religious consciousness of the savage should be studied in connection with his mythology and his rituals. The following bibliography suggests materials for such a study. The mythology of the North American Indian is a particularly interesting field.

*1 ACHELIS, A. *Die Ekstase in ihrer kulturellen Bedeutung.* Berlin, 1902.

*2 ACHELIS, T. "Die Stellung Tangaloas in der polynesischen Mythologie," *Globus,* 67:229–31; 249–51; 270–72.

*3 ACHELIS, T. *Ueber Mythologie und Kultus von Hawai.* Braunschweig, 1895.

4 ACHELIS, T. "Animal Worship," *The Open Court,* 11:705–17.

*5 AMES, E. S. *The Psychology of Religious Experience.* [Forthcoming.]

6 ANDREE, R. *Ethnographische Parallelen und Vergleiche,* "Tagewählerei, Angang und Schicksalvögel," 1–17; "Einmauern," 18–23; "Sündenbok," 29–34; "Böser Blick," 35–45; "Werwolf," 62–80; "Vampyr," 80–94; "Speiseverbote," 114–27; "Schädelcultus," 127–47; "Trauerverstümmlung," 147–52; "Personennamen," 165–84.

7 ANDREE, R. *Ethnographische Parallelen und Vergleiche* (Neue Folge), "Besessene und Geisteskranke," 1–7; "Sympathiezauber," 8–17; "Bildnis raubt die Seele," 18–20; "Baum und Mensch," 21–23; "Die Totenmünze," 24–29; "Der Donnerkeil," 30–41; "Jagdaberglauben," 42–48.

*7a ASHTON, W. G. *Shinto* (*The Way of the Gods*). London, 1905.

8 BASTIAN, A. *Die heilige Sagen der Polynesier.* Leipzig, 1881.

9 BASTIAN, A. "Ueber die priesterlichen Functionen unter Naturstämmen," *Zeits. für Ethn.,* 21:109–54.

10 BASTIAN, A. *Die Verbleibs-Orte der abgeschiedenen Seele.* Berlin, 1893.

10a BEAUCHAMP, W. M. "Early Religion of the Iroquois," *Am. Antiq. and Orient. Jour.,* 14:344–49.

*11 BLEEK, W. H. I. *Reynard the Fox in South Africa; or Hottentot Fables and Tales.* London, 1864.

*12 BOAS, F. Introduction to J. Teit's "Traditions of the Thompson River Indians of British Columbia," *Am. Folk-Lore Soc., Mem.,* 6:1–18.

[All of Boas' writings are of the greatest importance, and he is pre-eminent in mythology.]

*12a Boas, F. "The Mythology of the Bella Coola Indians," *Am. Mus. of Nat. Hist., Mem.*, 2:26–127.

12b Boas, F., and Hunt, G. "Kwakiutl Texts," *Am. Mus. of Nat. Hist., Mem.*, 5:3–532; 14:3–269.

13 Boas, F. *Indianische Sagen von der nordpacifischen Küste Nordamerikas.* Berlin, 1895.

14 Boas, F. "Die Mythologie der nordwestamerikanischen Küstenvölker," *Globus*, 53:121–27; 153–57; 315–19; 54:10–14; 141–44; 216–21; 298–302.

*15 Boas, F. "Dissemination of Tales among the Natives of North America," *Jour. Am. Folk-Lore*, 4:13–20.

15a Boas, F. "Zur Mythologie der Indianer von Washington und Oregon," *Globus*, 63:154–57; 172–75; 190–93.

*15b Boas, F. "Traditions of the Tillamook Indians," *Jour. Am. Folk-Lore*, 11:23–38; 133–50.

*15c Boas, F. "The Doctrine of Souls and of Disease among the Chinook Indians," *Jour. Am. Folk-Lore*, 6:39–43.

*16 Bogoras, W. "The Folklore of Northeastern Asia, as Compared with That of Northwestern America," *Am. Anth.*, N. S., 4:577–683.

*16a Bogoras, W. "The Chuckchee-Religion," *Am. Mus. of Nat. Hist., Mem.*, 11:277–536.

*17 Bourke, J. G. "Medicine Men of the Apache," *Bur. Am. Ethn., Rep.*, 9:443–603.

18 Boyle, D. "On the Paganism of the Civilised Iroquois of Ontario," *Jour. Anth. Inst.*, 30:263–73.

19 Brinton, D. G. *American Hero Myths.* Philadelphia, 1882.

20 Brinton, D. G. *The Myths of the New-World.* Philadelphia, 1896.

21 Brinton, D. G. *Nagualism: A Study in Native American Folk-Lore and History.* Philadelphia, 1894.

22 Brinton, D. G. *Religions of Primitive Peoples.* New York, 1889.

23 Buckland, A. W. "Points of Contact between Old-World Myths and Customs and the Navajo Myth, Entitled 'The Mountain Chant,'" *Jour Anth. Inst.*, 22:346–55.

24 Buckley, E. *Phallicism in Japan.* (University of Chicago dissertation.) 1895.

*25 Bülow, W. "Die samoanische Schöpfungssage," *Internat. Archiv für Ethnog.*, 12:58–66. On same subject, *Globus*, 71:375–79.

26 CALLAWAY, H. *Nursery Tales, Traditions, and Histories of the Zulus.* Natal, 1868.

27 CALLAWAY, H. "On Divination and Analogous Phenomena among the Natives of Natal," *Jour. Anth. Inst.*, 1:163–83.

28 CALLAWAY, H. *The Religious Systems of the Amazulu.* Natal, 1868–70.

29 CAMPBELL, J. M. "Notes on Spirit Basis of Belief and Custom," *Indian Antiquary*, 23:333–38, and Vols. 24–30 *passim.*

[A collection of curious information, mainly on modern Europe and India.]

30 CANFIELD, W. *The Legends of the Iroquois, Told by "The Corn-planter."* New York, 1903.

31 CARUS, P. *The History of the Devil and the Idea of Evil.* (*Internat. Folk-Lore Assoc. Arch.*, 3.) Chicago, 1900.

32 CHAMBERLAIN, A. F. "Mythology of Indian Stocks North of Mexico," *Jour. Am. Folk-Lore*, 18:111–22.

[Altogether devoted to a valuable indication of the literature on the mythology of the Indian north of Mexico.]

32*a* CHAMBERLAIN, A. F. "Kootenay Medicine-Men," *Jour. Am. Folk-Lore*, 14:95–99.

33 CHRISTALLER, J. G. "Negermärchen von der Goldküste," *Zeits. des Vereins für Volkskunde*, 4:61–71.

34 CLARKE, K. M. *Maori Legends.* London, 1896.

*35 CODRINGTON, R. H. "Religious Beliefs and Practices in Melanesia," *Jour. Anth. Inst.*, 10:261–315.

36 COHEN, H. "Mythologische Vorstellungen von Gott und Seele," *Zeits. für Völkerpsych. und Sprachwissenschaft*, 5:396–434; 6: 113–31.

*37 CRAWLEY, A. E. "Taboos of Commensality," *Folk-Lore*, 6:130–44.

38 CROOKE, W. *The Popular Religion and Folk-Lore of Northern India.* Westminster, 1896.

39 CROOKE, W. "Primitive Rites of Disposal of the Dead, with Special Reference to India," *Jour. Anth. Inst.*, 29:271–89.

*40 CUSHING, F. H. "Outlines of Zuñi Creation Myths," *Bur. Am. Ethn., Rep.*, 13:321–447.

*41 CUSHING, F. H. *Zuñi Folk-Tales.* New York, 1901.

42 CUSHING, F. H. "The Zuñi Social, Mythic, and Religious Systems," *Pop. Sci. Mo.*, 21:186–92.

43 CUSHING, F. H. "Zuñi Fetiches," *Bur. Am. Ethn., Rep.*, 2:9–45.

44 DANKS, B. "Burial Customs of New Britain," *Jour. Anth. Inst.*, 21:348–56.

45 DAVENPORT, F. M. *Primitive Traits in Religious Revivals.* New York, 1905.

46 DAVIDS, T. W. *Hibbert Lectures on the Origin and Growth of Religion as Illustrated by Some Points in the History of Indian Buddhism.* London, 1881.

*47 DENNETT, R. E. *At the Back of the Black Man's Mind,* "Ndongoism," 85–95; "Nkici-ism," 96–99.

*47a DIXON, R. B. "Maidu Myths," *Am. Mus. Nat. Hist., Bul.,* 17: 33–118.

*48 DORSEY, G. A. *The Mythology of the Wichita.* (Carnegie Institution.) 1904.

*49 DORSEY, G. A. *The Pawnee Mythology* (Part I). (Carnegie Institution.) 1906.

*50 DORSEY, G. A. *Traditions of the Skidi Pawnee.* Boston, 1904. (*Am. Folk-Lore Soc., Mem.,* 8.)

[For Dorsey's work this is a convenient point to begin.]

*51 DORSEY, G. A. "The Cheyenne," *Field Mus. Pub., Anth. Ser.,* 9: 1–186.

*52 DORSEY, G. A. "The Arapaho Sun Dance," *Field Mus. Pub., Anth. Ser.,* 4:1–228.

*53 DORSEY, G. A., AND KROEBER, A. L. *Traditions of the Arapaho, Field Columbian Mus. Pub., Anth. Ser.,* 5:1–475.

[Other papers in this series by Dorsey, and Dorsey and Voth, are: "The Mishongnovi Ceremonies of the Snake and Antelope Fraternities," "The Oraibi Soyal Ceremony," etc.]

*54 DORSEY, J. O. "A Study of Siouan Cults," *Bur. Am. Ethn., Rep.,* 11:351–544.

54a DORSEY, J. O. "The Cegiha Language," *U. S. Geog. and Geol. Sur.: Cont. to Am. Ethn.,* 6:1–779 [on Siouxan myth].

55 DUBOIS, C. G. "The Religion of the Luiseño Indians of Southern California," *Univ. of California Pub. in Am. Archaeol. and Ethn.,* 8:68–186.

56 DUNLOP, W. "Australian Folklore Stories," *Jour. Anth. Inst.,* 28: 22–34.

*57 EHRENREICH, P. *Die Mythen und Legenden der südamerikanischen Urvölker und ihre Beziehungen zu denen Nordamerikas und der Alten Welt.* Berlin, 1905. (*Zeits. f. Ethn.* 37, Sup.)

38 ELLIS, A. B. *The Land of Fetish.* London, 1883.

59 ELMSLIE, D. "Folk-Lore Tales of Central Africa," *Folk-Lore,* 3: 92–110.

*60 FARRAND, L. "The Significance of Mythology and Traditions," *Jour. Am. Folk-Lore,* 17:14–22.

*60*a* FARRAND, L. "Traditions of the Chilcotin Indians," *Am. Mus. of Nat. Hist., Mem.,* 4:3–75.

*60*b* FARRAND, L., AND KAHNWEILER, W. S. "Traditions of the Quinault Indians," *Am. Mus. of Nat. Hist., Mem.,* 4:79–132.

*61 FEWKES, J. W. "The Tusayan Ritual: A Study of the Influence of Environment on Aboriginal Cults," *Smithsonian Inst., Rep.* for 1895:683–700.

*61*a* FEWKES, J. W. "The Tusayan New Fire Ceremony," *Boston Soc. Nat. Hist., Proc.,* 26:422–58.

*62 FEWKES, J. W. "The Lesser New-Fire Ceremony at Walpi," *Am. Anth.,* N. S., 3:438–53.

*63 FEWKES, J. W. "Tusayan Flute and Snake Ceremonies," *Bur. Am. Ethn., Rep.,* 19:957–1011.

*64 FEWKES, J. W. "Tusayan Katcinas," *Bur. Am. Ethn., Rep.,* 15: 245–313.

*65 FEWKES, J. W. "Tusayan Snake Ceremonies," *Bur. Am. Ethn., Rep.,* 16:267–312.

*66 FEWKES, J. W. A Few Summer Ceremonials at the Tusayan Pueblos," *Jour. Am. Ethn. and Arch.,* 2:1–159.

*67 FEWKES, J. W., AND STEPHEN, A.M. "The Mam-zrau'-ti: A Tusayan Ceremony," *Am. Anth.,* 5:217–45.

*68 FEWKES, J. W., AND OWENS, J. G. "The La'-la-Kon-ta: A Tusayan Dance," *Am. Anth.,* 5:105–29.

*69 FEWKES, J. W. "The Snake Ceremonials at Walpi," *Jour. Am. Ethn. and Arch.,* 4:1–126.

*70 FEWKES, J. W. "A Comparison of Sia and Tusayan Snake Ceremonials," *Am. Anth.,* 8:118–41.

*71 FEWKES, J. W. "A Suggestion as to the Meaning of the Moki Snake Dance," *Jour. Am. Folk-Lore,* 4:129–38.

*72 FEWKES, J. W. "Tusayan Migration Traditions," *Bur. Am. Ethn., Rep.,* 19:577–633.

73 FISON, L. *Tales of Old Fiji.* London, 1904.

[Introduction excellent.]

74 Fison, L. "Notes on Fijian Burial Customs," *Jour. Anth. Inst.*, 10:137–49.

*75 Fletcher, A. C. "The Hako, a Pawnee Ceremony," *Bur. Am. Ethn., Rep.*, 22:5–368.

76 Florenz, K. "Ancient Japanese Rituals," *Asiat. Soc. of Japan, Trans.*, 27:1–112.

[Continuation of 3 papers in Vols. 7 and 9 by Sir E. Satow.]

77 Florenz, K. "Nihongi, oder japanische Annalen," *Mitth. d. Gesellsch. für Natur- u. Völkerkunde Ostasiens*, Suppls. 5 and 6.

78 Fortier, A. *Louisiana Folk-Tales in French Dialect and English Translation.* Boston, 1895.

79 Fraser, J. "The Ethnic Variation of Myths," *Am. Antiq. and Orient. Jour.*, 22:213–18.

*80 Frazer, J. G. *The Golden Bough: A Study in Magic and Religion.* London, 1900. 3 vols.

[A further enlarged edition in press.]

*81 Frazer, J. G. "On Certain Burial Customs as Illustrative of the Primitive Theory of the Soul," *Jour. Anth. Inst.*, 15:64–101.

82 Führer, H. *Lithotherapie: Historische Studien über die medizinische Verwendung der Edelsteine.* Berlin, 1902.

*83 Gennep, A. v. *Les rites de passage.* Paris, 1909.

[Treats the ritual concerned with the "transition" of the individual from one status to another. On the order of Crawley's *Mystic Rose.*]

83*a* Gennep, A. v. *Religions, mœurs et légendes.* Paris, 1908.

*84 Gennep, A. v. *Tabou et totémisme à Madagascar.* Paris, 1904.

85 Gerber, A. "Uncle Remus Traced to the Old World," *Jour. Am. Folk-Lore*, 6:245–57.

*86 Gomme, G. L. *Ethnology in Folklore.* ("Mod. Sci." Ser.) New York, 1892.

*86*a* Gomme, G. L. *Folklore as a Historical Science.* New York, 1908.

86*b* Grey, G. *Polynesian Mythology.* 2d ed. Auckland, 1885.

*87 Griffis, W. E. *The Religions of Japan.* London, 1895.

*88 Grinnell, G. B. *Blackfoot Lodge Tales.* New York, 1892.

*89 Grinnell, G. B. *Pawnee Hero Stories and Folk-Tales.* New York, 1889.

90 Groot, J. J. M. de. *The Religious Systems of China.* Leyden, 1892.

*91 Haberland, C. "Ueber Gebräuche und Aberglauben beim Essen,"

Zeits. für Völkerpsych. und Sprachwissenschaft, 7:353–85; 18: 159; 128–70; 255–84; 357–94.

*92 HADDON, A. C. *Cambridge Anth. Expedition to Torres Straits, Rep.*, "Magic," 6:192–240; "Religion," 6:241–316; "Funeral Ceremonies," 5:248–62; "Folk-Tales," 5:9–120; 6:1–63.

*93 HADDON, A. C. *Magic and Fetishism*. London, 1906.

*94 HADDON, SELIGMAN, AND WILKINS. *Cambridge Anth. Expedition to Torres Straits, Rep.*, "Magic and Religion," 5:320–78.

*95 HALE, H. *The Iroquois Book of Rites*. Philadelphia, 1883.

96 HARRISON, C. "Religion and Family among the Haidas," *Jour. Anth. Inst.*, 21: 14–29.

*96*a* HAULLEVILLE, A. DE, ET COART. "La religion chez les Congolais," *Ann. du Musée du Congo*, 3 sér., 1: 145–315.

97 HEWITT, J. N. B. "The Iroquoian Concept of the Soul," *Jour. Am. Folk-Lore*, 8:107–16.

98 HEWITT, J. N. B. "Orenda, and a Definition of Religion," *Am. Anth.*, N. S., 4:33–46.

99 HILDBURGH, W. L. "Notes on Sinhalese Magic," *Jour. Anth. Inst.*, 38:148–206.

*100 HOFFMAN, W. J. "The Mide'wiwin or 'Grand Medicine Society' of the Ojibwa," *Bur. Am. Ethn., Rep.*, 7:143–300.

101 HOFFMAN, W. J. "Mythology of the Menomoni Indians," *Am. Anth.*, 3:243–58.

*102 HOLLIS, A. C. *The Masai*, "Stories," 103–237; "Myths and Traditions," 264–81.

*103 HOLLIS, A. C. *The Nandi*, "Folk-Tales," 101–23.

*104 HOSE, C., AND MCDOUGALL, W. "The Relations between Men and Animals in Sarawak," *Jour. Anth. Inst.*, 31:173–213.
[Important on animal worship.]

*104*a* HOVORKA, O. v., UND KRONFELD, A. *Vergleichende Volksmedizin*. Stuttgart, 1908.
[Important on sympathetic magic and the folk-mind.]

*105 HOWITT, A. W. *The Native Tribes of South-East Australia*, "Medicine Men and Magic," 355–425; "Beliefs and Burial Practices," 426–508.

*106 HOWITT, A. W., AND SIEBERT, O. "Legends of the Dieri and Kindred Tribes of Central Australia," *Jour. Anth. Inst.*, 34:100–29.

107 JACOBS, J. "The Migration of Fables" (Introd. to Jacobs' ed. of North's version of the *Fables* of Pilpay). London, 1888.

107*a* JACOTTET, E. *Treasury of Basuto Lore.* Vol. 1. London, 1909.

108 JASTROW, M. *The Religions of Babylonia and Assyria.* Boston, 1898.

109 JETTÉ, J. "On the Medicine-Men of the Ten'a," *Jour. Anth. Inst.,* 37:157–88.

110 JETTÉ, J. "On Ten'a Folk-Lore," *Jour. Anth. Inst.,* 38:298–367.

111 JEVONS, F. B. *An Introduction to the History of Religion.* London, 1896.

111*a* JEVONS, F. B. "The Place of Totemism in the Evolution of Religion," *Folk-Lore,* 10:369–83.

*111*b* JOCHELSON, W. "Religion and Myths of the Koryak," *Am. Mus. of Nat. Hist., Mem.,* 10:13–382.

112 JOHNSTON, SIR H. *George Grenfell and the Congo,* "Religion," 2: 632–65.

*113 JONES, W. *Fox Texts* (*Pub. Am. Ethn. Soc.*). Leyden, 1907.

*113*a* JONES, W. "The Culture-Hero Tradition of the Saux and Fox," *Jour. Am. Folk-Lore,* 14:225–39.

113*b* JONG, K. H. E. DE. *Das antike Mysterienwesen in religionsgeschichtlicher, ethnologischer und psychologischer Beleuchtung.* Leyden, 1909.

*114 JÜLG, B. *Mongolische Märchen.* Innsbruck, 1867.

115 KATE, H. TEN. "Aus dem japanischen Volksglauben," *Globus,* 90: 111–14; 126–30.

*116 KING, I. "The Differentiation of the Religious Consciousness," *Psych. Rev. Mon.,* Sup. 6, No. 4.

117 KINGSLEY, M. H. "The Fetish View of the Human Soul," *Folk-Lore,* 8:138–51.

118 KRAUSE, G. A. "Beiträge zum Märchenschatz der Afrikaner," *Globus,* 72:229–33; 254–58.

*119 KRAUSS, F. S. *Slavische Volkforschungen.* Leipzig, 1908.

120 KREHL, C. L. E. *Ueber die Religion der vorislamischen Araber.* Leipzig, 1863.

*120*a* KROEBER, A. L. "The Religion of the Indians of California," *Univ. of Cal. Pub. in Am. Arch. and Ethn.,* 4:319–56.

*120*b* KROEBER, A. L. "Indian Myths of South Central California," *Univ. of Cal. Pub. in Am. Arch. and Ethn.,* 4:169–250.

*120*c* KROEBER, A. L. "The Arapaho," *Am. Mus. Nat. Hist., Bul.,* 18: 1–229; 279–454.

*120d KROEBER, A. L. "Gros Ventre Myths and Tales," *Am. Mus. Nat. Hist., Anth. Pap.*, 1, Pt. 3:55–139.

121 LA FLESCHE, F. "Death and Funeral Customs among the Omahas," *Jour. Am. Folk-Lore*, 2:3–11.

122 LANDTMAN, G. *The Origin of Priesthood.* Ekenaes, 1905.

123 LANG, A. *Custom and Myth: A Study in Early Usage and Belief.* London, 1904.

124 LANG, A. *Magic and Religion.* London, 1901.

125 LANG, A. *Myth, Ritual, and Religion.* London, 1899.

*126 LASCH, R. "Religiöser Selbstmord und seine Beziehung zum Menschenopfer," *Globus*, 75:69–74.

*126a LASCH, R. "Die Finsternisse in der Mythologie und im religiösen Brauch der Völker," *Arch. f. Religionswiss.*, 3:97–152.

127 LELAND, C. F. *Algonquin Legends of New England.* Boston, 1884.

128 LENORMANT, F. *Chaldean Magic.* (Translation.) London, 1878.

*128a LEONARD, A. G. *The Lower Niger and Its Tribes.* New York, 1906.

[Entire volume on African religion.]

129 LIEBRECHT, F. "Hottentottische Märchen," *Zeits. für Völkerpsych. und Sprachwissenschaft*, 5:58–73.

*130 LIPPERT, J. *Allgemeine Geschichte des Priesterthums.* Berlin, 1884.

131 MACDONALD, J. "Manners, Customs, Superstitions, and Religions of South African Tribes," *Jour. Anth. Inst.*, 19:264–96.

131a MAGET, G. "Sur les mœurs des Japonais," *Rev. d'Anth.*, 10:448–67; 11:591–612.

133 MALLERY, G. "Manners and Meals," *Am. Anth.*, 1:193–207.

*134 MARETT, R. R. *The Threshold of Religion.* L., 1909.

[Contains the valuable paper "From Spell to Prayer," from *Folk-Lore*, 15: 132–65.]

*134a MARETT, R. R. "Is Taboo a Negative Magic?" in *Anthropological Essays Presented to E. B. Tylor*, 219–34.

*135 MATTHEWS, W. "Navaho Legends," *Am. Folk-Lore Soc. Mem.*, 5: 1–299.

*136 MATTHEWS, W. "The Mountain Chant: A Navajo Ceremony," *Bur. Am. Ethn., Rep.*, 5:385–467.

[An important paper.]

*136a MATTHEWS, W. "The Night Chant, a Navaho Ceremony," *Am Mus. of Nat. Hist., Mem.*, 6:3–304.

*137 MATTHEWS, W. "The Prayer of a Navajo Shaman," *Am. Anth.*, 1:149–71.

*137*a* MATTHEWS, W. "Navaho Myths, Prayers and Songs, with Texts and Translations," *Univ. of Cal. Pub. in Am. Arch. and Ethn.*, 5: 25–63.

*138 MATTHEWS, W. "Some Illustrations of the Connection between Myth and Ceremony," *Internat. Cong. of Anth., Mem.*, 246–51.

139 MAURER, F. "Das Tabu im Alten Testament," *Globus*, 90:136–38.

*140 MOONEY, J. "The Ghost-Dance Religion and the Sioux Outbreak of 1880," *Bur. Am. Ethn., Rep.*, 14:641–1110.

*141 MOONEY, J. "Myths of the Cherokee," *Bur. Am. Ethn., Rep.*, 19: 3–548.

*142 MOONEY, J. "The Sacred Formulas of the Cherokees," *Bur. Am. Ethn., Rep.*, 7:301–97.

*143 MORGAN, L. H. *League of the Iroquois*, 141–248. [Religion.]

*144 MYERS, C. S., AND HADDON, A. C. *Cambridge Anth. Exped. to Torres Straits, Rep.*, "Funeral Ceremonies," 6:126–62.

145 NASSAU, R. H. *Fetichism in West Africa*. New York, 1904.

146 NEGELEIN, J. VON. "Der Individualismus im Ahnencult," *Zeits. für Ethn.*, 34:49–94.

*146*a* NUOFFER, O. "Ahnenfiguren von der Geelvinkbai, Holländisch Neuguinea," *Dresden K. Zool. u. Anth.-Ethnog. Mus., Abhandl.*, 12: Pt. 2, 1–30.

147 NEWELL, W. W. "Ritual Regarded as the Dramatization of Myth," *Internat. Cong. of Anth., Mem.*, 237–45.

148 NINA-RODRIGUES. *L'animisme fétichiste des nègres de Bahia*. Bahia, 1900.

149 OWEN, M. A. *Folk-Lore of the Musquakie Indians of North America*. London, 1904.

150 PARKER, K. L. *Australian Legendary Tales: Folklore of the Noongahburrahs as Told to the Piccaninnies*. London, 1896.

151 PARKER, K. L. *More Australian Legendary Tales Collected from Various Tribes*. London, 1898.

152 PEET, S. D. "Secret Societies and Sacred Mysteries," *Am. Antiq.*, 27:81–96.

153 PEET, S. D. "The Worship of the Rain God," *Am. Antiq.*, 16: 341–56.

154 PERRIG, A. "Aus den Bekenntnissen eines Dakota-Medizinmannes," *Globus*, 80:128–30.

154*a* PETITOT, E. *Traditions indiennes du Canada nordouest.* Paris, 1886.

155 PHISTER, N. P. "The Indian Messiah," *Am. Anth.*, 4:105–8.

156 PISCHON, C. N. *Der Einfluss des Islam auf das Leben seiner Bekenner.* Leipzig, 1881.

157 PLEYTE, C. M. "An Unpublished Batak Creation Legend," *Jour. Anth. Inst.*, 26:103–7.

158 POWELL, J. G. "Mythology of the North American Indians," *Bur. Am. Ethn., Rep.*, 1:17–56.

*159 PREUSS, K. T. "Einfluss der Natur auf die Religion," *Zeits. d. Gesellsch. für Erdk. zu Berlin*, 40:361–80; 433–60; 464–66.

*160 PREUSS, K. T. "Die Feuergötter," *Anth. Gesellsch. in Wien, Mitth.*, 33:129–223.

*161 PREUSS, K. T. [See Bibliog. 5:146. Now published separately.]

162 RADLOFF, W. *Das Schamanenthum.* Leipzig, 1885.

*163 RATZEL, F. *History of Mankind*, "Religion," 1:38–65; "Religion in Oceania," 1:300–330; "The Religion of the Malays," 1:467–86; "Religion and Priesthood in America," 2:143–59.

164 RAY, S. H. "Stories from the Southern New Hebrides," *Jour. Anth. Inst.*, 31:147–53.

165 REID, A. P. "Religious Belief of the Ojibois or Sauteux Indians," *Jour. Anth. Inst.*, 3:106–13.

166 REINACH, S. *Cultes, mythes et religions.* Paris, 1905.

167 RÉVILLE, A. *Histoire des religions: les religions des peuples noncivilisés.* Paris, 1882–83.

168 RÉVILLE, A. *La religion chinoise.* Paris, 1889.

168*a* RIDLEY, W. "Australian Languages and Traditions," *Jour. Anth. Inst.*, 2:257–91.

*169 RINK, H. J. *Tales and Traditions of the Eskimo.* Edinburgh, 1875.

*170 RINK, S. "The Girl and the Dogs—An Eskimo Folk-Tale," *Am. Anth.*, 11:181–87; 209–15.

*171 RIVERS, W. H. R. *The Todas*, 38–460. [Ceremonial, Ritual, Magic, Religion.]

[This should be read for evidence of the extreme to which ritualism can be carried. It is also a model study.]

172 RUSSELL, F. "An Apache Medicine Dance," *Am. Anth.*, 11:367–72.

*173 SATOW, E. "Ancient Japanese Rituals," *Asiat. Soc. of Japan, Trans.*, 7:95–132; 409–55; 9:183–211.

174 SCHNEIDER, W. *Religion der afrikanischen Naturvölker.* Münster i. W., 1891.

175 SCHOOLCRAFT, H. R. *Myth of Hiawatha, and Other Oral Legends.* Philadelphia, 1856.

176 SCHULTZE, F. *Der Fetischismus.* Leipzig, 1871.

177 SCHURTZ, H. *Die Speiseverbote.* Hamburg, 1894.

178 SCHWARTZ, W. "Mythologische Bezüge zwischen Semiten und Indogermanen," *Zeits. für Ethn.*, 24:157–76.

*178*a* SELER, E. "Altmexikanische Studien II" [Magic and Ceremonial], *Berlin K. Mus. f. Völkerkunde, Veröffentl.*, 6:29–209.

179 SKEAT, W. *Fables and Folk-Tales from an Eastern Forest.* Cambridge, 1901.

*180 SKEAT, W. W. *Malay Magic.* London, 1900.
[One of the best studies.]

*181 SKEAT AND BLAGDEN. *Pagan Races of the Malay Peninsula,* "Burial Customs and Beliefs," 2:89–116; "Natural Religion and Folk-Lore," 2:173–376.

*182 SIMMEL, G. "A Contribution to the Sociology of Religion," *Am. Jour. Sociol.*, 11:359–76.

183 SMITH, E. A. "Myths of the Iroquois," *Bur. Am. Ethn., Rep.*, 2:47–116.

*184 SMITH, W. R. *Lectures on the Religion of the Semites.* London, 1894.

*185 SPENCER, B., AND GILLEN, F. J. *The Native Tribes of Central Australia,* "Traditions," 387–449; "Burial and Mourning," 497–511; "Spirit Individuals,'" 512–21; "Medicine Men," 522–53; "Myths Relating to Sun, Moon, Eclipses, etc.," 561–66.

*186 SPENCER, B., AND GILLEN, F. J. *The Northern Tribes of Central Australia,* "Magic," 455–78; "Medicine Men," 479–89; "Beliefs in Beings Endowed with Superior Powers," 490–504; "Customs Relating to Burial and Mourning," 505–55.

187 SPENCER, H. *The Principles of Sociology,* 1:125–434 [Ghost Theory of Origin of Religion]; "Ecclesiastical Institutions," 3:3–178.

188 STARBUCK, E. D. *The Psychology of Religion.* London, 1899.

*189 STEINMETZ, S. R. *Ethnologische Studien zur ersten Entwickelung der Strafe,* "Der Aknenkult," 1:141–298; "Die göttlichen Strafen auf Erden," 2:349–94.

*190 STEINMETZ, S. R. "Continuität oder Lohn und Strafe im Jenseits der Wilden," *Arch. für Anth.*, 24:577–608.

191 STEINTHAL, H. "Allegemeine Einleitung in die Mythologie," *Archiv f. Religionswissenschaft,* 3:249–73.

*192 STEVENSON, J. "Ceremonial of Hasjelti Dailjis and Mythical Sand Painting of the Navajo Indians," *Bur. Am. Ethn.*, Rep., 8:235–85.

193 STEVENSON, M. C. "A Chapter of Zuñi Mythology," *Internat. Cong. of Anth. Mem.,* 312–19.

*193*a* STEVENSON, M. C. "The Zuñi Indians, Their Mythology, Esoteric Fraternities and Ceremonies," *Bur. Am. Ethn., Rep.,* 23:1–608.

*194 STEVENSON, M. C. "The Sia," *Bur. Am. Ethn., Rep.,* 11:3–157.

*195 STOLL, O. *Suggestion und Hypnotismus in der Völkerpsychologie* Leipzig, 1904.

[This remains the best general treatment of hypnotic influence in its ethnological aspect.]

196 SWANTON, J. R. "Haida Texts" (Masset Dialect), *Am. Mus. of Nat. Hist., Mem.,* 14:273–802.

197 SWANTON, J. R. "Haida Texts and Myths" (Skidegate dialect), *Bur. Am. Ethn., Bul.,* 29.

*197*a* TEIT, J. *Traditions of Thompson River Indians of British Columbia.* (*Am. Folk-Lore Society, Mem.,* 6:1–137.) Boston, 1898.

197*b* THEAL, G. M. *Kaffir Folk-Lore.* London, 1882.

198 THOMPSON, B. H. "The Kalou-Vu (Ancestor-Gods) of the Fijians," *Jour. Anth. Inst.,* 24:340–59.

198*a* THOMPSON, R. C. *Semitic Magic: Its Origins and Development.* London, 1908.

*199 TYLOR, E. B. *Early History of Mankind,* "Historical Tradition and Myths of Observation," 306–32; "Geographical Distribution of Myths," 333–71.

*200 TYLOR, E. B. *Primitive Culture,* "Mythology," 1:273–416; "Animism," 1:417–502; 2:1–361.

*201 TYLOR, E. B. "On the Limits of Savage Religion," *Jour. Anth. Inst.,* 21:283–99.

*201*a* VOTH, H. R. "The Traditions of the Hopi," *Field Mus. Pub., Anth. Ser.,* 8:1–319.

[Voth has other papers in the same series.]

202 WARDLE, H. N. "The Sedna Cycle: A Study in Myth Evolution," *Am. Anth.,* N. S., 2:568–80.

203 WESTERMARCK, E. "The Nature of the Arab Ginn, Illustrated by the Present Beliefs of Morocco," *Jour. Anth. Inst.,* 29:252–69.

*203a WESTERMARCK, E. "L'âr or the Transference of Conditional Curses in Morocco," in *Anthropological Essays Presented to E. B. Tylor*, 361–74.

*204 WILKIN, A. *Cambridge Anth. Expedition to Torres Straits, Rep.*, "Tales of the Warpath," 5:308–19.

*204a WILKINSON, R. J. *Malay Beliefs.* London, 1906.

205 WILLIAMS, F. W. "Chinese Folk-Lore and Some Western Analogies," *Smithsonian Inst., Ann. Rep.* for 1900:575–600.

206 WILLIAMS, SIR M. *Brahmanism and Hinduism.* New York, 1889.

*206a WISSLER, C., AND DUVALL, D. C. "Mythology of the Blackfoot Indians," *Am. Mus. Nat. Hist., Anth. Pap.*, 2, Pt. I:1–164.

207 WLISLOCKI, H. VON. *Volksglaube und religiöser Brauch der Magyaren.* Münster i. W., 1895.

208 WLISLOCKI, H. VON. *Volksglaube und religiöser Brauch der Zigeuner.* Münster i. W., 1891.

*209 WUNDT, W. *Völkerpsychologie.*
[Vol. II is on religion and myth.]

*211 YARROW, H. C. "A Further Contribution to the Study of the Mortuary Customs of the North American Indians," *Bur. Am. Ethn., Rep.*, 1:87–203.
[Resumes and supersedes "1st Paper" (1880).]

212 ZACHARIAE, T. "Indische Märchen aus den 'Lettres édifiantes et curieuses," *Zeits. des Vereins für Volkskunde*, 16:129–40.

The *Journal of American Folk-Lore* is rich in relatively brief papers bearing on Part VI. The following may be examined, in addition to the titles from this periodical listed above. The stars indicate papers containing important general principles, or standpoint: BOAS F., *"The Folk-Lore of the Eskimo," 17:1–13; CHAMBERLAIN, A. F., "Nanibozhu amongst Algonkian Tribes," 4:193–213, "The Mythology and Folk-Lore of Invention," 10:88–100, "Bibliography of Philippine Folk-Lore," 16:116–21, *"Variation in Early Human Culture," 19:177–189; CHAMBERLAIN, I. C., "Bibliography of Folk-Lore Relating to Women," 12:32–37; DIXON, R. B., "The Color-Symbolism of the Cardinal Points," 12:10–16, *"System and Sequence in Maidu Mythology," 16:32–36, *"Some Aspects of the American Shaman," 21:1–12, *"Mythology of the Central and Eastern Algonkins," 22:1–9; FEWKES, J. W., "The Sacrificial Element in Hopi Worship," 10:187–201, *"The Growth of the Hopi Ritual," 11:173–94, "Sky-God Personations in Hopi Worship," 15:14–32; GARDNER, F., "Filipino Versions of Cinderella [with important comparative note by W. W. Newell], 19:265–80; KITTREDGE, G. L., "Disenchantment by Decapitation," 18:1–14; LA FLESCHE, F., *"Who Was the Medicine-

Man?" 18:269–75; MAXFIELD, B. L., AND MILLINGTON, W. H., "Visayan Folk-Tales," 19:98–112; cf. 205–11; MOONEY, J., *"Cherokee Theory and Practice of Medicine," 3:44–50; NEWELL, W. W., "Voodoo Worship and Child Sacrifice in Hayti," 1:16–30, "Reports of Voodoo Worship in Hayti and Louisiana," 2:41–47, *"Theories of Diffusion of Folk-Tales," 8:7–18, *"Individual and Collective Characteristics in Folk-Lore," 19:1–15; NUTTALL, Z., "Ancient Mexican Superstitions," 10:265–81; POWELL, J. W., *"The Interpretation of Folk-Lore," 8:97–105; RAE, J., "Laieikawai: A Legend of the Hawaiian Islands," 13:241–60.

PART VII
SOCIAL ORGANIZATION, MORALS, THE STATE

SOCIAL ORGANIZATION, MORALS, THE STATE

THE STATE

No race is without political organisation, even though it be so lax as among the Bushmen, whose little bands united for hunting or plunder are occasionally without leaders; or as we find among other degraded or scattered tribes, who are often held together only by superstition and want. What sociologists call individualism has never been found anywhere in the world as a feature in any race. When ancient races fall to pieces new ones quickly form themselves out of the fragments. This process is constantly going on. "Each individual stock," says Lichtenstein, "is in some measure only a transitory phenomenon. It will in course of time be swallowed up by one more powerful, or if more fortunate will split up into several smaller hordes which go off in different directions, and, after a few generations, know no more of each other." These political mutations have always the character of a re-crystallisation, not of a shapeless breaking up. It is only seldom that the organism is of long duration. One of the marks of the civilized man is that he accustoms himself to the pressure of the laws in the fulfilling of which he is himself practically interested. But if a comparatively well-ordered constitution has been founded among negroes, another community is sure soon to make its appearance on the frontier composed of persons belonging to the same stock who are subject to no ordinances, and these lawless outcasts often obtain through their freedom from every legal restraint and every regard for tribal relations, even through the consideration which attracts to them all the boldest and neediest men from neighbouring tribes, a force which is capable of converting the robber tribe into a conquering, state-founding, and ruling people. Plunder and conquest pass easily into one another. In all countries of which we know the history, predatory tribes have played an important part.

Most of what we know of the history of the natural races is the history of their wars. The first importation of firearms

which permitted unimportant powers to rise rapidly, marks the most sharply-defined epoch in the history of all negro states. What Wissmann says about the Kioko, "with them came firearms and therewith the formation of powerful kingdoms," is true of all. Is not this constant fighting the primitive condition of man in its lowest manifestation? To this it may be answered that hitherto our own peace has never been anything but armed, but among us serious outbreaks of the warlike impulse are interruptions in longer intervals of rest which are enjoined by the conditions of civilization, while among the races of which we are speaking, a condition like our mediæval "club law" is very often permanent. Yet even so it must be pointed out that among barbarians also there are peaceful races and peace-loving rulers. Let us not forget that bloodiest and most ruinous wars waged by the natural races have been those which they have carried on not among themselves but with Europeans, and that nothing has kindled violence and cruelty among them in such a high degree as has the slave trade, instigated by the avarice of more highly civilized strangers, with its horrible consequence of slave-hunting. When the most charitably just of all men who have criticised the natural races, the peaceable David Livingstone, could write in his last journal these words: "The principle of Peace at any Price leads to loss of dignity and injustice; the fighting spirit is one of the necessities of life. When men have little or none of it they are exposed to unworthy treatment and injuries,"—we can see that the inevitableness of fighting between men is a great and obtrusive fact.

But this state of war does not exclude civil ordinances, rather it evokes them. It is no longer war of all against all, but it rather represents a phase in the evolution of the national life when it has already been long in process of forming a state. The most important step from savagery to culture is the emancipation of the individual man from complete or temporary segregation or isolation. All that co-operates in the creation of societies as distinct from families was of the very greatest importance in the earliest stages of the evolution of culture, and here the struggle with Nature, in the widest sense, afforded the most important incitements. The acquisition of food might in the first instance

give rise to association in joint hunting and still more in joint fishing. Not the least advantage of the latter is the disciplining of the crews. In the larger fishing boats a leader has to be selected who must be implicitly obeyed, since all success depends upon obedience. Governing the ship paves the way to ruling the state. In the life of a race like that of the Solomon Islanders, usually reckoned complete savages, sea-faring is undoubtedly the only element which can concentrate their forces. The agriculturist living isolated will certainly never feel an impulse making so strongly for union; yet he too has motives for combination, he owns property, and in this property inheres a capital for his labour. Since this labour does not need to be again executed by the inheritors of this property there follows of itself the continuity of ownership and therewith the importance of blood relationship. Secondly, we find bound up with agriculture the tendency to dense population. Next, as the population draws closer and marks its boundaries, it, like every multitude of men who live on the same spot of earth, acquires common interests, and diminutive agricultural states spring up. Among shepherds and nomads the formation of states progresses more quickly, just in proportion as the need for combination is more active and includes wider spaces. This indeed lies in the nature of their occupation. Thus while the family is in this case of greater importance than in that first mentioned, the possibility of denser population is, on the other hand, excluded. But here the property requires stronger defence, and this is guaranteed by concentration, in the first place of the family. From an economic point of view it is more reasonable for many to live by one great herd than for the herd to be much subdivided. A herd is easily scattered and requires strength to keep it together. It is therefore no chance result that the family nowhere attains to such political importance as among nomad races. Here the patriarchal element in the formation of tribes and states is most decidedly marked; in a hunter-state the strongest is the centre of power, in a shepherd-state the eldest.

We are apt to regard despotism as a lower form of development in comparison with the constitutional state, and attribute to it accordingly a high antiquity. It used formerly to be thought

that beginnings of political life might be seen shaping themselves in the forms of it. But this is contradicted at the very outset by the fact that despotism stands in opposition to the tribal or patriarchal origin from which these states have grown. The family stock has of course a leader, usually the eldest; but apart from warfare his power is almost nil, and to over-estimate it is one of the most frequent sources of political mistakes made by white men. The chief's nearest relations in point of fact do not stand far enough below him to be mingled indiscriminately in the mass of the population over which he rules. Thus we find them already striving to give a more oligarchical character to the government. The so-called court of African or ancient American princes is doubtless the council which surrounds them on public occasions. Arbitrary rule, though we find no doubt traces of it everywhere in the lower grades, even when the form of government is republican, has its basis not in the strength of the state or the chief, but in the moral weakness of the individual, who submits almost without resistance to the domineering power. In spite of individual tyranny there is a vein of democracy running through all the political institutions of the "natural" races. Nor could it well be otherwise in a society which was built up upon the *gens*, kindred in blood, communistic, under the system of "mother-right." But herein lay no doubt an obstacle to progress.

The power of the sovereign is greatly strengthened by alliance with the priesthood. A tendency to theocracy is incidental to all constitutions, and very often the importance of the priest surpasses that of the ruler in the person of the chief. The weak chiefs of Melanesia, in order not to be quite powerless, apply the mystic Duk-Duk system to their own purposes; while in Africa it is among the functions of the chief to make atonement for his people by magic arts, when they have incurred the wrath of higher Powers, and to obtain for them by prayers or charms advantages of all kinds. This, however, does not prevent the influence of the chief from being overshadowed by that of a priest who happens to be in possession of some great fetish. Conversion to Christianity has almost always destroyed the power of the native chiefs, unless they have contrived to take the peo-

ple with them. But the religious sentiment is the one thing that has maintained respect for a chief's children, even when they have become slaves.

The power of the chief is further heightened when the monopoly of trade is combined with his magic powers. Since he is the intermediary of trade, he gets into his own hands everything coveted by his subjects, and becomes the bestower of good gifts, the fulfiller of the most cherished wishes. This system finds its highest development in Africa, where the most wealthy and liberal chief is reckoned the best. In it lies the secure source of great power and often of beneficial results. For at this point we must not overlook the fact that one of the most conspicuous incitements to progress, or, let us say more cautiously, to changes in the amount of culture which a race possesses, is to be sought in the will of prominent individuals. We also find chiefs, however, whose power is firmly based upon superior knowledge or skill. The Manyema chief, Moenekuss, so attractively depicted by Livingstone, was keen about having his son taught blacksmithing, and the Namaqua chief, Lamert, was the most efficient smith among his tribe. But of course it is in the art of war that accomplishment is most valued in a chief. In giving judgment, he needs no great abundance of Solomonian wisdom, since in all more serious accusations the culprit is ascertained by means of magic, and in this duty too the popular council generally cooperates. Meanwhile whatever the chief's position may be, it is never comparable with the power conferred by the wealth of culture existing in a European people; and it were to be wished that descriptive travellers would employ such terms as "king," "palace," and the like with more discretion. It is only among the war-chiefs that regal parade is customary; the others are often scarcely distinguished from their people.

Every race has some kind of legal system; among most of the "natural" races, indeed, this fluctuates between that under which the injured person takes the law into his own hands, and that of money-atonement for the offence. There is no question of the majesty of the law; all that is thought of is the indemnification of the person who has suffered damage. In Malayan law, for example, the former course may be taken with a culprit

caught in *flagrante delicto* even to the point of killing a thief; but in any other case redemption, that is a money penalty, is enjoined; and similarly among the negro races. Among lower as well as higher races violence has a very free play, and tends to limit its sphere as among individuals according to the resistance with which it meets. Blood-feuds in various degrees are to be found among all barbarous races. In the case of Polynesians and Melanesians they reach a fearful pitch. Cook tells us that the New Zealanders appeared to him to live in constant mutual dread of attack, and that there were very few tribes who did not conceive themselves to have suffered some injury at the hands of another tribe and meditate revenge for it.

The wars of "natural" races are often far less bloody than those waged among ourselves, frequently degenerating into mere caricatures of warlike operations. Still the loss of life caused by them must not be under-estimated, since they last for a long time, and the countries inhabited by "natural" races can in any case show only small population. In the case of Fiji, Mr. Williams estimates the yearly loss of human lives in the period of barbarism at 1500 to 2000, "not including the widows who were strangled as soon as the death of their husbands was reported." These figures are quite sufficient to have contributed materially to the decrease of the population. Firearms have diminished war, while increasing the losses. But with this continual war, guerilla war as it might be termed, are associated those catastrophes resulting from raids, in which great destruction of human life accompanies the outbreaks of warlike passion. The final aim of a serious war among the natural races is not the defeat, but the extermination of the adversary; if the men cannot be reached, the attack is made upon women and children, especially where there is a superstitious passion for the collection of human skulls, as among the head-hunting Dyaks of Borneo. Of south-east Africa, Harris says: "Whole tribes have been drawn root and branch from their dwelling-places, to disappear from the earth, or to wander with varying fortunes over illimitable tracts, driven by the inexorable arm of hunger. Therefore for hundreds of miles no trace of native industry meets our eyes, nor does any human habitation; never-ending wars present the picture of one

uninhabited wilderness." Rapine is associated with murder to produce a misery which civilized races can hardly realise. But the culmination of this devastating power is reached when more highly endowed, or at least better organised hordes of warriors and plunderers, well practised in slaughter and cruelty, appear on the scene. Amputation of hands and feet, cutting off of noses and ears, are usual. This ill-treatment often has the secondary object of marking a prisoner, and to this must be referred the tattooing of prisoners of war. Lichtenstein saw a Nama whom the Damaras had taken prisoner. They had circumcised him and extracted his middle upper front teeth: "He showed us this, and added that if he had been caught by them a second time, these very recognisable marks would inevitably have entailed the loss of his life."

Losses of life and health may be repaired by a few generations of peace, but what remains is the profound moral effect. This is the shattering of all trust in fellow-men and in the operation of moral forces, of the love of peace and the sanctity of the pledged word. If the politics of civilized races are not distinguished by fidelity and confidence, those of the natural races are the expression of the lowest qualities of mistrust, treachery, and recklessness. The only means employed to attain an object are trickery or intimidation. In the dealing of Europeans with natural races they have, owing to this, had the great advantage of very rarely having to face a strong combination of native powers. The single example of any great note is the alliance of the "six nations" of North American Indians belonging to the Iroquois stock, which was dangerous to Europeans in the seventeenth and eighteenth centuries. An attempt at an alliance, which might have been very serious, was made after the so-called Sand River treaty of 1852 by Griquas, Basutos, Bakwenas, and other Bechuana trbes, but never came to completion, and recent years have again shown abundantly how little the South African tribes can do in spite of their numbers and their often conspicuous valour, for want of the mutual confidence which might unite them and give a firm ground for their efforts.

Constant fear and insecurity on the part of native races is a necessary result of frequent treachery on that of their foes. It

is significant that the great majority of barbarous peoples are so fond of weapons and never go unarmed; and nothing better indicates the higher state of civic life in Uganda than that walking sticks there take the place of weapons. It is noted as a striking feature when no weapons are carried, as Finsch points out with regard to the people of Parsee Point in New Guinea.

The custom of treating strangers as enemies, under a superstitious fear of misfortune and sickness, or of knocking on the head persons thrown on shore by shipwreck like "washed up cocoa-nuts," was certainly a great hindrance to expansion. But we hear that among the Melanesians the question was discussed whether this was lawful, and that even strangers used to link themselves by marriage with a new place. If they belonged to a neighbouring island or group of islands they were not treated altogether as strangers, since they were not regarded as uncanny. Polynesians, who were frequently driven upon the Banks Islands, were received there in a friendly manner. If scarcely one of the innumerable exploring expeditions in Australia made its way without being threatened or attacked by the aborgines, we must not overlook involuntary violations of the frontiers of native districts, for even to this day in Central Australia unlicensed entry upon foreign territory reckons as a serious trespass.

Thus, as in the family and in society, we meet also in the political domain with a tendency to the sharpest separation. Who does not recognise in this latent state of war a great cause of the backward condition of the "natural" races? The greatness of civilized states, which have worked themselves up to the clear heights of development, lies in the fact that they act upon each other by means of mutual incitement, and so are ever bringing forth more perfect results. But this mutual incitement is just what is missing in a state of continuous war. The forces which make for culture both from within and without are alike weakened, and the consequence is stagnation if not retrogression.

Want of defined frontiers is in the essence of the formation of barbarous states. The line is intentionally not drawn, but kept open as a clear space of varying breadth. Even when we reach the semi-civilized states the frontiers are liable to be uncertain. The entire state is not closely dependent upon the area which it

covers, especially not upon the parts near the borders. Only the political centre, the most essential point of the whole structure, is fixed. From it the power which holds the state together causes its strength to be felt through the outlying regions in varying measure. We have examples of frontier points and frontier spaces at every stage. The frontier spaces are kept clear, and even serve as common hunting-grounds, but they serve also as habitations for forces hostile to civil authority, for desperadoes of every shade of villainy.

Not infrequently the formation of new states starts from these spaces. The cases in which sharp frontiers are soonest formed is where the two fundamentally different modes of civilization and life, nomadism and agriculture, come in contact. Here of necessity frontiers are sharply drawn against races of the steppes, and art endeavours to contribute its aid by building earthworks and even walls. The region of the steppes is the country of the great wall of China, and of the ramparts thrown up by Turks and Cossacks.

Leopold von Ranke has stated as a maxim of experience that when we study universal history it is not as a rule great monarchies that first present themselves, but small tribal districts or confederacies of the nature of states. This is shown in the history of all great empires; even the Chinese can be carried back to small beginnings. No doubt they have been of short duration with the single exception of the Roman Empire. Even that of China has passed through its periods of breaking up. From the Roman Empire the nations have learnt how great territories must be ruled in order to keep them great in extent, for since its time history has seen many empires, even surpassing the Roman in magnitude, arise and maintain themselves for centuries. Apart from the way in which the teaching of history has been taken to heart, the increase of population and the consequent accession of importance to the material interests of the people has unquestionably contributed to this.

But there are deeper-lying reasons for the smallness of primitive states. Among most "natural" races the family and the society form unions so large, so frequently coinciding, so exclusive, that little remains to spare for the state. The rapid

break-up of empires is counter-balanced by the sturdy tribal life. When the empires fall to pieces new ones form themselves from the old tribes. The family of blood-relations, in their common barrack or village, represents at the same time a political unit, which can from time to time enter into combination with others of the kind; to which perhaps it is bound by more distant relationship. But it is quite content to remain by itself so long as no external power operates to shake its narrow contentment. Negro Africa, with all its wealth of population, contains no single really large state. In that country, the greater an empire the less its duration and the looser its cohesion. It requires greater organising and consolidating power, such as we meet with among the Fulbes or Wahuma, not merely to found, but also even if with difficulty, to maintain kingdoms like Sokoto or Uganda. Even the Zulus, high as they stand in warlike organisation, have never been able to spread permanently beyond their natural boundaries, and at the same time maintain cohesion with their own country. They have not the capacity for planning a peaceable organisation. Even in the Musselman states of the Soudan we meet with this want of firm internal cohesion; which is equally at the bottom of the weakness which brought down the native states of Central and South America. The more closely we look at the actual facts about Old Mexico, the less inclined shall we be to apply terms like empire and emperor to the loose confederation of chiefs on the plateau of Anahuac. The greatness of the Inca realm was exaggerated to the point of fable. When we hear of the renowned and redoubtable tribe of the Mandan Indians, we are astonished to learn that it numbered only from 900 to 1000 souls. In the Malay Archipelago it seems not to have been until the arrival of Islam that the formation of states rose above disjointed village communities. Even in our own day the great powers of South and East Asia lacked the clearness and definition in the matter of political allegiance, which are a privilege of the higher civilizations.

Instead of the extension of single states, what takes place is the foundation of new ones by migration and conquest. It is the multiplication of cells by fission instead of the growth of the organism. It is striking how often the same legend or tradition

recurs in Africa or elsewhere. A monarch sends out a band of warriors to conquer a country or a town; if the enterprise fails they settle down quietly and marry the daughters of the people whom they came to overthrow. Such was the origin of the Metabele; such, it is said, that of the kindred Masitu. Thus too are explained the Fulbe settlements on the Lower Niger, and the Chinese oases in the Shan States. Without crediting all these traditions, we may see in them a proof at once of the great part played by war in blending races in ancient times, and of the difficulty of founding coherent states. Instead of these we find colonies which cut themselves loose either peaceably or after a war. The Alfurs of the eastern islands in the Malay Archipelago have definite rules for the government of their colonies, and in Polynesia of old, colonisation must have been as necessary in the life of a state as formerly in Greece.

Among races in a low stage the cementing force of contests waged against natural dangers, threatening the entire community and binding them together for common defence, is naturally but little felt. A strongly uniting power by promoting the value of common interests, has a favourable effect on the general culture. In the low-lying tracts on the coast of the North Sea, in Germany and Holland, the common danger from broken dykes and inundation by reason of furious storms and high tides has evoked a feeling of union which has had important results. There is a deep meaning in the myths which intimately connect the fight against these forces of Nature, these hundred-headed hydras, or sea-monsters crawling on to the land, with the extortion of the highest benefits for races in the foundation of states and the acquisition of culture. No race shows this more than the Chinese, whose land, abounding in streams and marshes, was able to offer more than sufficient work to its embanking and draining heroes—Schem, Schun, Jao, and their like. In Egypt a similar effect of the anxiety for the yearly watering and marking out of the land is obvious from history.

Generally all common needs which draw men out of barren isolation must have the effect of promoting culture. Above all, too, they strengthen the constitution which organises the work done to satisfy those needs. But the sovereignty must come first.

Outside the sphere of European civilization almost all states are ruled by intruding conquerors; that is by foreigners. The consciousness of national identity does not come into existence until later, and then makes its way as a state-forming force if the intellectual interests of the race add their weight on the same side. In almost all countries representing greater political units, we find for this reason various nationalities. At first one is superior to another, then they are co-ordinate; it is only in small states that the entire people has all along been formed of a single stock.—F. RATZEL, *History of Mankind*, 1:129–41.

AUSTRALIAN TRIBAL GOVERNMENT

When an Australian tribe is looked at from the standpoint of an ordinary observer, the conclusion that there is no recognised form of government seems to be justified. Apparently no person, or group of persons, has the right to command, under penalties for disobedience, or who is obeyed by the community. There seems to be no person to whom the whole community yields submission, who has peculiar privileges which are patent to observation, or who is surrounded by more or less of savage pomp and ceremony. All that is seen by a general superficial view of an Australian tribe is, that there is a number of families who roam over certain tracts of country, in search of food, and that while they appear to show a considerable respect to the old men, all the males enjoy such liberty of action, that each may be considered to do what seems best to himself.

A more intimate acquaintance with such a tribe, however, shows that there must be some authority and restraint behind this seeming freedom, for it is found that there are well-understood customs, or tribal laws, which are binding on the individual, and which control him, as well as regulate his actions towards others. I have shown in the chapters on marriages and on the initiation ceremonies that there are stringent laws which regulate the intercourse of sexes, which relate to the secret ceremonies of the tribe, which restrict the choice of food, and so on; and these laws or customs are enforced by severe penalties, even in some cases by death itself.

It is quite true that many such laws or customs are obeyed

without the dread of physical punishment being inflicted for their breach, by any tribal authority, individual or collective. But such laws or customs are obeyed because the native has been told, from his earliest childhood, that their infraction will be followed by some supernatural personal punishment. Take, for instance, the universal law of mutual avoidance of each other by the man and his wife's mother. I know of no rule which is more implicitly obeyed. The belief is that some result of a magical nature will follow a breach of this rule, for instance that the person's hair will become prematurely grey. The nearest approach to a personal punishment for this offence, if it can be so called, which I have met with, was in the coast Murring tribes, where any personal contact, even accidental touching of one by the other, was punished by the man being compelled to leave the district, his wife returning to her parents.

This rule of avoidance would properly come within the statement made by Mr. E. M. Curr where he says, "the power which enforces custom in our tribes is for the most part an impersonal one." This impersonal authority must have been either public opinion or a supernatural sanction. According to Mr. Curr, it is "education," that is to say, a blackfellow is educated from infancy in the belief that a departure from the customs of his tribe is invariably followed by one, at least, of many possible evils, such as becoming prematurely grey, being afflicted with ophthalmia, skin eruptions, or sickness, but above all, that it exposes the offender to the danger of death from sorcery. This is undoubtedly true as to such a case as that of the mother-in-law, or as to a breach of the rule that a novice must not receive food from the hand of a woman (Kurnai), or speak in the presence of one, without covering his mouth with the corner of his skin rug or blanket (Yuin), but it does not account for the corpora. punishments inflicted for other offences.

I shall detail these cases at length further on, but as an instance will refer to the *Pinya,* or armed party, of the Dieri tribe, which goes out to kill some man who is considered by the old men of the tribe (tribal council) to have brought about the death of some one by evil magic. Such offences as these are therefore punished by the actual authority of persons in the

tribe, and not merely by public opinion or the effect of "education," and it is evident that there must be some executive power by which such offences as these are dealt with and punished.

I shall now show what this executive power is, and how it acts in an Australian tribe.

In the Dieri tribe, as in all others of those kindred to it, the oldest man of a totem is its *Pinnaru,* or head. In each horde there is also a *Pinnaru,* who may happen also to be the head of a totem. But it does not follow that the head of a totem or of a local division has necessarily much, or even any, influence outside his totem or division. I remember such an instance at Lake Hope where the *Pinnaru* was, by reason of his great age, the head of the eagle-hawk totem, but he had otherwise little personal influence, for he was neither a fighting-man, a medicine-man, nor an orator. He was the head of his totem by reason of his age, but was not the *Pinnaru* of the local division. The *Pinnarus* are collectively the Headmen of the tribe, and of them some one is superior to the others. At the time when I knew the tribe, in 1862–63, the principal Headman was one Jalina-piramurana, the head of the *Kunaura* totem, and he was recognised as the head of the Dieri tribe. Subsequently Mr. S. Gason, as an officer of the South Australian Mounted Police, was stationed in the Dieri country for six years, and was well acquainted with this man. He has described him to me as a man of persuasive eloquence, a skilful and brave fighting-man, and a powerful medicine-man. From his polished manner the whites called him "the Frenchman." He was greatly feared by his own and the neighbouring tribes. Neither his brothers (both of them inferior to him in bravery and oratorical power) nor the elder men presumed to interfere with his will, or to dictate to the tribe, except in minor matters. He decided disputes, and his decisions were received without appeal. The neighbouring tribes sent messengers to him with presents of bags, *Pitcheri,* red ochre, skins, and other things. He decided when and where the tribal ceremonies were to be held, and his messengers called together the tribe from a radius of a hundred miles to attend them, or to meet on inter-tribal matters.

His wonderful oratorical powers made his hearers believe

anything he told them, and always ready to execute his commands. He was not by nature cruel or treacherous, as were many of the Dieri, and when not excited was considerate, patient, and very hospitable. No one spoke ill of Jalina-piramurana, but on the contrary with respect and reverence. This is understood when Mr. Gason adds that he distributed the presents sent to him amongst his friends to prevent jealousy. He used to interfere to prevent fights, even chastising the offender, and being sometimes wounded in so doing. On such an occasion there would be great lamentation, and the person who had wounded him was not infrequently beaten by the others.

As the superior Headman of the Dieri, he presided at the meetings of the *Pinnarus,* sent out messengers to the neighbouring tribes, and even had the power of giving away young women, not related to him, in marriage, of separating men from their wives, when they could not agree, and of making fresh matrimonial arrangements.

He periodically visited the various hordes of the Dieri tribe, from which he also periodically received presents. Tribes even at a distance of a hundred miles sent him presents, which were passed on to him from tribe to tribe.

He was one of their great *Kunkis* or medicine-men, but would only practise his art on persons of note, such as heads of totems or his personal friends.

He was the son of a previous Headman, who was living during Mr. Gason's residence in the country, and who, although too infirm to join in the ceremonies, gave advice to the old men. He boasted that he had the command of the tribe before his son acquired it. He was believed to be proof against magical practices, such as "striking with the bone."

Jalina-piramurana had succeeded to and indeed eclipsed his father. He was the head of the *Kunaura murdu,* and boasted of being the "tree of life," for the seed *Kunaura* forms at times the principal source of vegetable food of these tribes. He was also spoken of as the *"Manyura murdu,"* that is, the plant itself of which the *Kunaura* is the seed.

I knew Jalina-piramurana when in the Dieri country before Mr. Gason went to it. He was at Lake Hope, (Pando) as I

was returning to the South Australian settlements, and, to use the language of the present day, interviewed me, together with a deputation of his *Pinnarus,* with two requests. The first was, that I would go with him and kill all the "Kunabura-kana," that is men of Kunabura, who were "*Malinki kana,*" that is, bad men; the second, that I would tell the white men who were coming up to his country, according to the information sent him by the tribes further down, that they should "sit down on the one side of Pando, and the *Kana* would sit down on the other, so that they would not be likely to quarrel." I can say also, that he was a courteous blackfellow, with plenty of conversation. He walked with me for some miles on our next day's journey round Lake Hope, and was much amused at my remark, when the horse I was leading suddenly terrified him by neighing close to his ear,—"Wotta yappali yenni, nanto yattana," that is, "Do not fear, the horse is talking."

I observed that there were such *Pinnarus* in the tribes to the north and north-east of the Dieri, for instance the Yaurorka and Yantruwunta.

When going northward from my depôt at Cooper's Creek, on the occasion of my second expedition, I obtained the services of a young Yantruwunta man, who knew the country as far north as Sturt's Stony Desert. He belonged to the small tribal group in whose country my depôt was fixed. My first stage was to a pool of water, from which I could make a good departure northwards. At this place the young man ran away after dark, being alarmed, as he afterwards told me, at the precautions I took for the safety of the party during the night. With my own blackboy I tracked him in the morning to a camp of his tribe at a small pool in the river-bed, about two miles distant. Here the *Pinnaru,* after satisfying himself that I meant no harm to the guide or to his people, sent two of his men to bring the refugee from the place where he was concealed, and handed him over with an admonition not to run away again. Here was an exercise of authority, and obedience to it.

When in the Yaurorka country I camped for the night near the encampment of one of the small groups of that tribe. Some of the old men, the *Pinnarus* of the place, came to visit me, and

asked me to go with them to see the *Pinna-pinnaru* (the "Great-great-one"), who could not come to see me. I went with them and found, sitting in one of the huts, the oldest blackfellow I had ever seen. The other *Pinnarus* were mostly grey-headed and bald, but he was so old as to be almost childish, and was covered with a grizzly fell of hair from head to foot. The respect with which he was treated by the other old men was as marked in them as the respect which they received from the younger men. They told me that he was so old that he could not walk, and that when they travelled some of the younger men carried him.

Such Headmen as those of the Dieri tribe appear to be found in the neighbouring tribes, but no doubt Jalina-piramurana was an exceptionally able and therefore an unusually influential man.

It may be mentioned here that the old men, in their leisure time, instructed the younger ones in the laws of the tribe, impressing on them modesty of behaviour and propriety of conduct, as they understood it, and pointing out to them the heinousness of incest. The old women also instructed the young ones in the same manner. . . . .

In the Wiimbaio tribe a Headman must have age, personal prowess, talents as a leader, and a clever tongue. If a man had magical powers, he might be feared, but he would not be thereby a Headman. In one of their tribal councils the old men spoke first, after them the younger men, then the old men directed what should be done. There were also meetings of the whole community, who might be camped together. At an assembly of that kind all the men sat in a circle near the camp, old men and young men together, and most of them carried something in their hands, such as a club. At one of these councils, which occurred about the year 1850, one of the oldest men, named Pelican, went into the ring with spear and shield and exhibited an imaginary combat, using his weapons to explain to the young men how to fight. This old man had not any special claim to authority excepting that he was old and skilful in fighting. At times, in the evening, an old man might rise up in his camp, holding his spear or some other weapon in his hand, and make an oration. Once when they feared that another

tribe might come up against them, an old man stood up in the evening in this manner and made a speech on the subject. . . . .

Among the Mukjarawaint some of the heads of totems were also Headmen of local groups, but unless such a man possessed qualifications for the position, some younger man would be chosen in preference to him. When the Headman of a totem died, all the totemites were called together by the man next in age; and not only the men of the totem, but every one—men, women, boys, and girls. The women of the totem who were married were necessarily with their husbands, and were not notified. The assembly was called together in the manner I have spoken of in relation to "messengers."

When all were assembled at the appointed place, they formed a ring, the old men with their wives in the front row, the younger men with their wives in the next, and outside were the young men and the girls to look on, but not to take any other part in the proceedings. These were commenced by one of the elders speaking, followed by other men; finally, the sense of the meeting was taken, and then the old men stated who should be the Headman. The choice being thus made, presents were given to the new head by the other Headmen, who had collected things from their people, such as opossum or other skin rugs or weapons.

If a Headman offended the tribes-people, or was in some respects very objectionable to them, the other Headmen would at some great tribal meeting consult at the *Jun* or council-place, and perhaps order him to be killed. This probably would be carried out under the personal direction of one of them.

I was not able to learn of an instance where a son necessarily succeeded his father in this office. . . . .

The Wurunjerri serve as an example of the practice of the tribes which formed the Kulin nation. The old men governed the tribe, and among them there were men called Ngurungaeta. If a man was sensible and, as Berak put it, "spoke straight," and did harm to no one, people would listen to him and obey him. Such a man would certainly become a Ngurungaeta, if his father was one before him. It was he who called the people together for the great tribal meetings, sent out messengers, and according to his degree of authority, gave orders which were obeyed.

Such a man was always of mature age, and possessed of some eminent qualities, for which he was respected.

At an expiatory combat he could put an end to it, if he thought that enough had been done. There is a passage in the life of Buckley which bears on the powers of the Ngurungaeta. He says, "I had seen a race of children grow up into women and men, and many of the old people die away, and by my harmless and peaceable manner amongst them had acquired great influence in settling their disputes. Numbers of murderous fights I had prevented by my interference, which was received by them as well meant; so much so that they would often allow me to go among them previous to a battle and take away their spears and waddies and boomerangs." This shows that Buckley had, by reason of age and consideration, grown into the position of a Ngurungaeta or Headman. So far as my inquiries have gone, I have not been able to find out that such an interference by a Ngurungaeta, as spoken of by Buckley, would be ineffective. The Kulin would not have refused to obey such an interference, unless in a case where public opinion happened to be very strongly divided and one side were against him. In the case of ceremonial ordeals and expiations, as I shall have occasion to mention later on, such interference by a Headman has been effectual in staying the hands of his own men, and apparently those of the other side also.

Among the Kulin there was a Headman in each local group, and some one of them was recognised as being the head of all. Some were great fighting-men, others were orators, and one who lived at the time when Melbourne was established, was a renowned maker of songs and was considered to be the greatest of all.

If a Headman had a son who was respected by the tribes-people he also would become a Ngurungaeta in time. But, if he were, from the native point of view, a bad man, or if people did not like him, they would get some one else, and most likely a relative of some former Headman, such as his brother or brother's son.

A Headman could order the young men of the camp to do things for him and they would obey him. He might, as I have

heard it put, say to the young men, "Now all of you go out, and get plenty of 'possums and give them to the old people, not raw but cooked." Similarly the wife of the Ngurungaeta could order the young women about.

Each Headman had another man "standing beside him," as they say, to whom he "gave his words." This means that there was a second man of somewhat less authority, who was his comrade, or rather "henchman," who accompanied him when he went anywhere, who was his mouthpiece and delivered his orders to those whom they concerned. When the Headman went out to hunt with his henchman, or perhaps with two of them, if he killed game, say a wallaby, he would give it to one to carry; if he killed another, the other man would carry it, and it was only when he obtained a heavy load that he carried anything himself.

The account of these Headmen given by William Thomas, who was Protector of the Blacks in the early years of the settlement of Port Phillip, falls into line with the particulars which I have given. I have condensed his statements as follows: "Each tribe has a Chief who directs all its movements, and who, wherever he may be, knows where all the members of the community are. The Chief, with the aged men, makes arrangements for the route each party is to take, when the tribe, after one of its periodical meetings, again separates.

"Besides the Chiefs, they have other eminent men, as warriors, counsellors, doctors, dreamers who are also interpreters, charmers who are supposed to bring or drive rain away, and also to bring or send away plagues, as occasion may require."

Such are Mr. Thomas's statements. He had great opportunities for obtaining information, for, as he says, he was "out with them for months," but it is much to be regretted that he did not place on record the very many facts which he must have seen as to their beliefs and customs, which would have been invaluable now. . . . .

In the Yerkla-mining tribe the medicine-men are the Headmen, and are called *Mobung-bai*, from *mobung*, "magic." They decide disputes, arrange marriages, and, under certain circumstances, settle the formalities to be observed in combats by ordeal,

and conduct the ceremonies of initiation. They cut the gashes which, when healed, denote the class of the bearer, or his hardihood and prowess. In fact, they wield authority in the tribe, and give orders where others only make requests. . . . .

When Sydney was established in 1788, the natives of Botany Bay, Port Jackson, and Broken Bay were found to be living distributed into families, the head, or senior, of which exacted compliance from the rest. When the English met with families, they were always accosted by the person who appeared to be the eldest of the party, while the women, youths and children were kept at a distance. The word which in their language signifies "father" was applied to their old men; and when after some time, and by close observation, they perceived the authority with which Governor Phillip commanded, and the obedience which he exacted, they bestowed on him the distinguishing appellation of *Be-anna* or "father." The title being conferred solely on him (although they perceived the authority of masters over their servants) places the true sense of the word beyond a doubt, and proves that to those among them who enjoyed that distinction belonged the authority of a Chief.

When any of them went into the town, they were immediately pointed out by their companions, or those natives who resided in it, in a whisper, and with an eagerness of manner which, while it commanded the attention of those to whom it was directed, impressed them likewise with an idea that they were looking at persons remarkable for some superior quality even among the savages of New South Wales.

In the Kurnai tribe, age was held in reverence, and a man's authority increased with years. If he, even without being aged, had naturally intelligence, cunning and courage, beyond his fellows, he might become a man of note, weighty in council, and a leader in war; but such a case was exceptional and, as a rule, authority and age went together. The authority of age also attached to certain women who had gained the confidence of their tribes-people. Such women were consulted by the men, and had great weight and authority in the tribe. I knew two of them, who being aged, represented the condition of the Kurnai before Gippsland was settled. Together with the old men, they

were the depositaries of the tribal legends and customs, and they kept alive the stringent marriage rules to which I have referred elsewhere, thus influencing public opinion very strongly. Possibly the reason for this may have been in part that in this tribe the women take part in the initiation ceremonies up to a certain point. . . . .

How a man gradually increased in influence as he increased in years is shown by the case of the last Gweraeil-kurnai. He was the man Bunbra, whom I shall mention when speaking of the expiatory combats later on in this chapter. I watched this man's career during many years. Since the time of the expiatory combat, in which he was the defendant, the old men, who were successively the leaders of the people, had died off, until Bunbra came to be the oldest man left. The name by which, apart from his English name, he was known, is *Jetbolan,* or the Liar; but, by reason of age, he finally became the Gweraeil-kurnai. During the same time Tulaba, the tribal son of the former great Headman Bruthen-munji, had also grown into age, and much consideration attached to him in his twofold character, as one of the elders and as being a worthy son of the former Headman. During this time the pressure of our civilisation had broken down the tribal organisation; the white man's vices, which the Kurnai had acquired, had killed off a great number, the remainder had mostly been gathered into the mission-stations, and only a few still wandered over their ancestral hunting-grounds, leading their old lives in some measure, and having apparently abandoned their ancestral customs. When, however, it was decided that the Jeraeil ceremony should be revived for the instruction of their young men, I observed with much interest, that the old tribal organisation arose again, so to say, out of the dust, and became active. Bunbra who, at the time when Bruthen-munji directed the proceedings of the Nungi-nungit against him, was a comparatively young man, and without any consideration in the tribe, was now by reason of his age its Headman, to whom all matters were referred. To him messengers were sent, he gave orders as to the time for assembling, and the others obeyed them. Indeed, without him they would not have moved at all.

At the Jeraeil ceremonies he was the leader, and it was

mainly his voice that decided questions which arose and were discussed at meetings of the initiated men. When during the ceremonies two of the novices were brought before the old men charged with having broken some of the ceremonial rules, it was Bunbra who spoke last, and his directions as to them were followed.

In one of the intervals of the ceremonies at the Jeraeil, when I was sitting with some of the old men; they spoke of the old times, and what was very unusual, of the old men who were now dead, and of their great actions. I could understand then how they came to be the Gweraeil-kurnai of the tribe. One of those they mentioned was a man of the Bratualung clan, who in a fight with one of the other clans, ran ahead of his men and broke the legs of some of the enemy with his hands, leaving them to be killed by his followers. So also another man of the Brayaka, who lived near where Rosedale now is, used in wet winters, when the ground was very soft with rains, to run down the old men kangaroos, and thus catch them with his hands, and kill them. Another old hero was Bruthen-munji, whom I have mentioned before. It was said that he ran down one of the Brajerak, at a place now known as Blackfellow's Gully, near Buchan, and held him till his brother, another fighting-man of renown, came up and killed him with his club. . . . .

I have constantly observed in those tribes with which I have had personal acquaintance, that the old men met at some place apart from the camp and discussed matters of importance, such as arrangements to be made for hunting game, for festive or ceremonial meetings, or indeed any important matter. Having made up their minds, one of them would announce the matter at another meeting, at which all the men would be present, sitting or standing round, the younger men remaining at the outside. At such a meeting, the younger the man the less he would have to say, indeed, I never knew a young man who had been only lately admitted to the rights of manhood presume to say anything or to take any part in the discussion. All that they have to do as part of the assembly is to listen to what the elders have to say.

In the Dieri tribe such meetings as these are composed of the heads of totems or local divisions, fighting-men, medicine-men,

and, generally speaking, of old men of standing and importance. That is to say, of the men who have been present at the series of ceremonies described in another chapter. The younger men look forward for years to the time when, having been present at the great Mindari ceremony, they will be permitted to appear, and ultimately to speak at the council of men. These meetings are so secret that to reveal what takes place at them is punished by death.

Mr. Gason, speaking of these councils, informed me that it was only after a long time, and when he had learned to speak the Dieri language, that he was permitted to be present at these meetings. The proceedings were directed by the principal Headman, and among the matters which it dealt with were: procuring death by magic, as for instance, "by the bone," murder, breach of the tribal moral code, offences against tribal customs, revealing the secrets of the tribal council, or the secrets of the initiation ceremonies to women or to the uninitiated.

Offences against the moral code would be intercourse with a woman of the same *murdu,* or who was too nearly related to the accused. Interference with the wife of another man, she being *Noa-mara* to the offender, would be merely a personal matter to be revenged by the injured husband, or by the kindred in a fight.

When a person had been adjudged guilty of having caused the death of another by magic, he was killed by an armed party (Pinya) sent out by the Headman.

The council also made arrangements for holding the great ceremonies, and on ceremonial occasions it reallotted the several pairs of *Pirraurus,* as before explained.

Such a meeting was summoned by some old man, instructed by the Headman. If the matter was of importance, he introduced it, and in doing so he adhered to the ancient customs of their fathers. If all were agreed to some course the council separated, if not, then it met at some future time.

Everything relating to the council is kept profoundly secret from those who have not the right to be present at it. As I have before said, Mr. Gason was for over two years unable to obtain permission to be present at it. He sought permission in the

broken English, usually spoken to the natives by the white men, he tried intimidation, and he tried the effect of presents, without avail. It was only when he had acquired a command of the Dieri language, and a knowledge of their customs, that he attained his wish. The tribe then said that *Kuchi* must have instructed him; and, as he worked on their superstitions by favouring this idea, the Dieri at length permitted him to attend their council, and assist at their ceremonies, until at length he was accepted as a fully initiated man when any great ceremony was about to take place. My own experience is much in line with that of Mr. Gason. It was only after I became one of the initiated in the Yuin tribe, that I was present at meetings of the old men at places apart from the camp, at which matters of tribal importance were discussed. The meeting-place where these councils are held is called by various names in different tribes. For instance by the Yuin it is *Katir-than, Jun* by the Wotjobaluk, and *Jain* by the Jajaurung. In order to announce a meeting, I have seen the leading man pick up a lighted stick from his camp fire, and, looking round at the other men, walk off to the appointed place.

It is well to quote Mr. Gason's own description to me of the proceedings of a council at which he was present: "I have frequently attended at their councils by invitation, and on occasions they gave me permission to speak. I was thus able to save the life of a man who was charged with having caused the death by magic of another person. Two of the members of the council also dared to speak in favour of their friend, the accused, and they afterwards made me presents of several bags and weapons for my advocacy of him. Three years later, however, he was cruelly killed by order of the council, for an offence which he had not committed, but with which his enemies had charged him.

"After the principal Headman has spoken, the heads of totems address the assembly. The manner of speaking is by the repetition of broken sentences, uttered in an excited and at times almost frenzied manner. Those who coincide with the speaker repeat his sentences in a loud voice, but no one comments on what he says until it comes to his turn to speak.

"The council always breaks up peaceably, but quarrels some-

times follow it, although the camp is not allowed to know the real cause of disagreements, for the secrets of the council are always kept as sacredly as those of a masonic lodge. The greatest cruelties are threatened against any one who should divulge its secrets, which are many. I have never heard the younger men or the women utter a word which could convey the idea that anything had been communicated to them.

"I have often been cautioned not to divulge what I had there heard and seen, nor to repeat to strangers any words uttered there, until they had convinced me that they had passed through the ceremony of *Karawali wonkana.*"

In the Turrbal tribe, as my valued correspondent Mr. T. Petrie tells me, there was no regular council, but the old men met and consulted on such matters as hunting, fishing, or the death of any person. They sent out messengers when the time for making *Kippers* came round, or when the mullet came in, or the Bunya-bunya fruit was ripe. What he describes is, however, the council of which I speak, and it falls in with other instances. In speaking of the "Bunya tribe," he also says that when the "council" of old men has met, and decided on holding a Bunya feast, they send out two medicine-men as messengers to friendly tribes.

In the tribes within a radius of about fifty miles of Maryborough the old men made up their minds as to the course to be followed in any matter, by having afternoon meetings held in private, a little way from the camp, women and young men not daring to approach within hearing. Those of the old men who choose attend such secret councils, and in the evening they orate, standing in their camps, and some of them make fine speeches.

The old men governed the tribe, but also consulted the people on matters which had to be decided. This they did by standing at their fires and speaking to all on the questions under consideration.

As the tribes spoken of by Mr. Aldridge met with the Turrbal at great tribal gatherings, his remarks as to the council of old men illustrates Mr. Petrie's statements, and seem to show, as I have said, that the old men in it met and consulted in secret on matters relating to the tribe.

In the Kaiabara tribe the old men held conferences on all matters of importance, sitting in a circle, with their clubs placed on the ground before them, the younger men being allowed to stand round and listen, but not to laugh or speak. One man at a time made a speech, while the others listened. . . . .

The punishment of offences.—When a man dies in the Dieri tribe, it is thought he has been killed by some one through the action of evil magic, for instance, by "pointing with the bone," or "striking with the bone," as it is called, a practice which I have described elsewhere.

When a man has been adjudged by the council to have killed some one by evil magic, an armed party called *Pinya* is sent out to kill him.

The appearance at a camp of one or more natives marked with a white band round the head, with the point of the beard tipped with human hair, and with diagonal red and white stripes across the breast and stomach, is the sign of a Pinya. These men do not speak, and their appearance is a warning to the camp to listen attentively to the questions they may think it necessary to put regarding the whereabouts of the condemned man. Knowing the discipline of a Pinya and its remorseless spirit, any and every question is answered in terror, and many a cowardly man in his fear accuses his friend or even his relative, and it is on this accusation that the Pinya throw the whole of the responsibility of the death they inflict. When the deed is done, the Pinya is broken up, and each man returns to his home.

A recent instance of a Pinya and its course of action is the following, and it must be premised that under the circumstances the *Neyi* (elder brother) is the protector of his *Ngatata* (younger brother). For instance, if there is some trouble in the "fighting place" with a man, his elder brother hastens to it, and calls on the adversary to deal with him. Similarly when a Pinya has judicially condemned some native to death, the penalty of death does not fall upon the offender, but on his eldest brother at that place. In the case referred to, a man with several companions came to a camp near Lake Hope. A man had lately died at Perigundi, from whence they came, and in order that they might be received by the people at Lake Hope, they halted twenty yards

from the camp and there gathered the spears and boomerangs that were thrown at them ceremonially by one of the Lake Hope men, they being as usual easily warded off. Then going nearer, they again halted and warded off the weapons thrown, and again moved on, until, being close together, the man from Perigundi and the man from Lake Hope should have taken hold of each other, and sat down together. But the former, not taking heed of the position of the sun and being dazzled by its rays, was unable to ward off the spear thrown at him, which entered his breast and he died in the night. His companions fled to Perigundi and there formed a *Pinya* of a number of men, and returned to Lake Hope. The leader of this was a man called Mudla-kupa, who suddenly appearing one evening placed himself before him who had killed the Perigundi man, and seizing his hand announced his sentence of death. An elder brother of this man drew Mudla-kupa to one side, saying, "Don't seize my *Ngatata,* nor even me, for see, there sits our *Neyi;* seize him." At the same time he threw a clod of earth in the direction in which the man was. Mudla-kupa now turned to him, seized him by the hand, and spoke the death sentence over him, which he received with stoical composure. Mudla-kupa led him to one side, when the second man of the Pinya came up, and as Mudla-kupa held the man out to him as the accused, he struck him with a *maru-wiri* and split his head open. The whole Pinya then fell upon him with spears and boomerangs. In order that they should not hear how he was being killed, the other men, women, and children in the camp made a great rustling with boughs and broken-off bushes.

The same Pinya executed about the same time two *Pinnarus* (elders), who lived at other places. It was reported that they strangled one, and brought him to life again (that is, they allowed him to recover), and the following night they burned the froth which came from his mouth when he was being strangled. It was supposed that this caused his death. In another case the Pinya thrust a spear into the side of the condemned man, so that, as the *Kunki* (medicine-man) said, "his heart was pierced," and then withdrew it. The *Kunki* closed the wound with sinew and the man lived for several days before he died. It was then said

that the *Kunki* killed him, brought him to life, and finally killed him again.

As connected with the Pinya, it may be well to state here the manner in which the blood revenge is avoided by the Dieri.

When a death occurs which would be followed up by the Pinya as just explained, there is a practice which may be said to act as a sort of peacemaking, in so far that the two parties show that by a respective bartering of goods, they put aside all enmities, and will shed no more blood on account of the man killed, whether by "giving the bone" or otherwise. A late instance of this practice called *Yut-yunto* at Kopperamana, will show how it acts.

A Lake Hope man, one Ngurtiyilina, who had lived for a long time at Kopperamana, died in the year 1899, at a place half-way between there and the Salt Creek. His elder brother was one Mandra-pirnani, much feared for his strength, and the blacks among whom Ngurtiyilina lived sent to him through their Headman Yut-yunto, a "cord," which being tied round his neck, authorised him to collect articles for barter with them. These were collected from the Kumari-kana belonging to Kopperamana, Kilallpanina, and the surrounding country. When he had collected sufficient articles for barter, messengers were sent out to carry information as to where and when the meeting would take place. Mandra-pirnani with a large following proceeded to the appointed spot, sending off and also receiving messengers by the way. Meanwhile a great number of men and women had collected at the "bartering place," awaiting the arrival of the Yut-yunto-kana and his companions. These had made their last camp a few miles off in order to arrive at the appointed place early in the day.

On the following morning they approached it in a column, with the Yut-yunto-kana as its leader, as if prepared for combat, and the two contingents of the other party, also under their leaders. The men were all armed with boomerang, shield and spear, and fully painted as a Pinya. Those of them who had participated in the funeral feast had a ring of charcoal powder drawn round the mouth. Immediately behind this armed band were the women carrying all the articles provided for barter.

The two parties being now near to each other, the leader of the Yut-yunto danced his war-dance, pointing now to the left and now to the right with his spear, while stamping rhythmically with his feet. The leader of the other party now came forward, and, approaching the leader of the Yut-yunto, ceremonially seized the cord round his throat, and breaking it, cast it into a fire. This being done, he said, *"Wordari yindi workarai?"* (How do you come?) *"Yindi tiri workarai?"* (Do you come in enmity?) To which the Yut-yunto answered, *"Aai! nganai murlari workarai."* (Oh no! I come peacefully!) Then the other said, "That being so, we will exchange our things in peace." As a sign of peace, they embraced each other, and then sat down amicably together. While this was going on, the inferior leaders had been dancing their war-dance opposite each other, and the party of Mandra-pirnani was led round by the inferior Headman to the left side of the bartering place, where they sat down behind him. The other party then moved on to it, and sat down behind their Headman. The women of each party crouched behind it, carefully concealing the articles for barter from the eyes of the opposite side.

Now the leader of one of the parties caused one of the articles, a shield or boomerang, to be handed to him. It was passed from the last man to the first, all standing in a row, and each man passing it between the legs of the man in front of him, so that it was not seen until produced to the leader, who stood at the head of the line. He, on receiving it, threw it down between the parties with an important air. Then one of the other side threw on it some article in exchange, for instance, a bundle of cord for tying up the hair. In this way article after article was exchanged, and then the Kumari-kana asked, "Are you peaceable?" In this case the reply, I believe, was, "Yes, we are well satisfied." Each person took the articles he had obtained by barter.

If in these cases the parties are not satisfied, there is first an argument, and then a regulated combat between all the men present. . . . .

An instance of what seems to have been the punishment of an offence against the tribe came partly under my own knowl-

edge. On my second expedition I had with me one of the Dieri from Blanch-water, which was at the time the farthest out-station in the far north of South Australia. He accompanied me through the country of his tribe, and beyond it as far as the Diamantina River, and when about where Birdville now is, he ran away fearing, as he told me afterwards, that I was going still farther north. Some time after I returned from the expedition, I learned that he had been killed by an armed party from his own tribe, who chased him for some nine miles before he was overtaken and killed. The reason given for this, was that he had been too familiar with the white men, and served them as guide.

In the Tongaranka tribe offences against the marriage laws and class rules were punished by death, and the whole tribe took the matter in hand. Individual offences, such as theft, were dealt with by the individual wronged, by spear or other weapon.

In the southern Kamilaroi disputes about hunting-grounds, and trespasses on them, occasioned numerous parleys, which sometimes settled the matter. At one such meeting, some fifty years ago, there were two white men with guns in the camp of the weaker party, who boasted that with their assistance they would kill all their opponents. These declared that they did not care, but would fight. The friends of the white men then advised them to go home, because if any disaster happened in the fight, their lives would be certainly taken for it. They left, and a messenger was sent to tell their adversaries that the white men had gone. It was then decided that an equal number from each side should fight the next day. But after all, this dispute was settled by single combat. . . . .

Among the tribes of south-western Victoria, in cases of blood-feud, if the murderer be known and escapes the pursuit of the victim's kindred, he gets notice to appear and undergo the ordeal of spear-throwing at the first great meeting of the tribes.

If he pays no attention to the summons, two strong active men, called *Paet-paet,* accompanied by some friends, are ordered by the chief to visit the camp where he is supposed to be con-

cealed and to arrest him. They approach the camp about the time when the people are going to sleep, and halt at a short distance from it. One of the Paet-paets goes to one side of the camp and howls in imitation of a wild dog. The other at the opposite side answers him by imitating the cry of the *Kuurka* (owl). These sounds bring the Chief to the front of his *Wuurn* (hut) to listen. One of the Paet-paets then taps twice on a tree with his spear, or strikes two spears together as a signal that a friend wishes to speak to him. He then demands the culprit, but as the demand is generally met by a denial of his being there, they return to their friends, who have been waiting to hear the result. If they still believe him to be concealed in the camp, they surround it at dawn, stamping and making a hideous noise to frighten the people. In the meantime the Chief, anticipating the second visit, has very likely aided the culprit to escape while it was dark.

Persons accused of wrong-doing get one month's (*sic*) notice to appear before the assembled tribes and be tried on pain of being outlawed and killed. When a man has been charged with an offence, he goes to the meeting armed with two war spears, a flat light shield, and a boomerang. If he is found guilty of a private wrong, he is painted white, and his brother, or near male relative, stands beside him as his second. The latter has a heavy shield, a *Liangle,* and a boomerang, and the offender is placed opposite to the injured person and his friends, who sometimes number twenty warriors. These range themselves at a distance of fifty yards from him, and each individual throws four or five spears and two boomerangs at him simultaneously "like a shower." If he succeeds in warding them off his second hands him his heavy shield, and he is attacked singly by his enemies, who deliver each one a blow with a Liangle. As blood must be spilt to satisfy the injured party, the trial ends when he is hit.

The following account of one of these ordeals in expiation was given to me by Berak, who was present at it. So far as I am able to fix the time, it must have been about the year 1840, and the locality was the Merri Creek near Melbourne. It arose out of a belief by the Bunurong who lived at Western Port, that

a man from Echuca, on the Murray River, had found a piece of bone of an opossum which one of their tribe had been eating, and then thrown away. They were told that he, taking up this bone between two pieces of wood, had placed it aside until, having procured the leg-bone of a kangaroo, he put the piece of opossum bone into its hollow and roasted it before his fire. He and others then sang the name of the Western Port man for a long time over it, until the spear-thrower fell down into the fire and the magic was complete. This news was brought down to the Bunurong and some time after the man died. His friends did not say anything, but waited till a young man of the Echuca tribe came into the Western Port District, when they killed him. News of this was passed from one to the other till it reached his tribe, who sent down a messenger to the Bunurong tribe, saying that they would have to meet them near Melbourne. This was arranged, and the old men said to the man, "Now, don't you run away; you must go and stand out, and we will see that they do not use you unfairly." This message had been given in the first instance by the Meymet to the Nira-baluk, who sent it on by the Wurunjerri to the Bunurong. It was sent in the winter to give plenty of time for the meeting, which took place on the Melbourne side of the Merri Creek. The people present were the Meymet, whose Headman had not come with them, the Bunurong with their Headman Benbu, the Mt. Macedon men with their Headman Ningu-labul, the Werribee people with the Headman of the Bunurong; finally there were the Wurunjerri with their Headman Billi-billeri.

All these people except the Meymet and the Bunurong were onlookers, and each party camped on the side of the meeting-ground nearest to their own country, and all the camps faced the morning sun.

When the meeting took place, the women were left in the camps, and the men went a little way off. The Bunurong man stood out in front of his people armed with a shield. Facing him were the kindred of the dead Meymet man, some nine or ten in number, who threw so many spears and boomerangs at him that you could not count them. At last a reed spear went through his side. Just then a Headman of the Buthera-baluk

who had heard what was to take place, and had followed the Meymet down from the Goulburn River, came running up, and went in between the two parties, shouting, "Enough!" and turning to the Meymet said, "You should now go back to your own country." This stopped the spear-throwing; they had had blood, and all were again friends. A great corrobboree was held that night.

Buckley gives an account of a somewhat similar case which happened in his tribe the Wudthaurung, and is worth quoting in this connection.

In speaking of an elopement, he thus describes the expiation which followed it, "At length the young man advanced towards us, and challenged our men to fight, an offer which was accepted practically by a boomerang being thrown at him, and which grazed his leg. A spear was then thrown, but he warded it off cleverly with his shield. He made no return to this, until one of our men advanced very near to him, with only a shield and waddy, and then the two went to work in good earnest, until the first had his shield split, so that he had nothing to defend himself with but his waddy. His opponent took advantage of this and struck him a tremendous blow on one side of the head, and knocked him down; but he was instantly on his legs again, the blood, however, flowing very freely over his back and shoulders. His friends then cried out, 'Enough!' and threatened general hostilities if another blow was struck. This had the desired effect, and they soon after separated quietly."

As a good instance of the manner in which trespasses by a person of one tribe on the country of another tribe were dealt with, I take the case of a man of the Wudthaurung tribe, who unlawfully took, in fact stole, stone from the tribal quarry at Mt. William near Lancefield. I give it in almost the exact words used by Berak in telling me of it, who was present at the meeting which took place in consequence, probably in the late forties.

It having been found out that this man had taken stone without permission, the Ngurungaeta Billi-billeri sent a messenger to the Wudthaurung, and in consequence they came as far as

the Werribee River, their boundary, where Billi-billeri and his people met them. These were the men who had a right to the quarry, and whose rights had been infringed. The place of meeting was a little apart from the respective camps of the Wurunjerri and the Wudthaurung.

At the meeting the Wudthaurung sat in one place, and the Wurunjerri in another, but within speaking distance. The old men of each side sat together, with the younger men behind them. Billi-billeri had behind him Bungerim, to whom he "gave his word." The latter then standing up said, "Did some of you send this young man to take tomahawk stone?" The Headman of the Wudthaurung replied, "No, we sent no one." Then Billi-billeri said to Bungerim, "Say to the old men that they must tell that young man not to do so any more. When the people speak of wanting stone, the old men must send us notice." Bungerim repeated this in a loud tone, and the old men of the Wudthaurung replied, "That is all right, we will do so." Then they spoke strongly to the young man who had stolen the stone, and both parties were again friendly with each other.

At such a meeting all the weapons were left at the respective camps, and each speaker stood up in addressing it.

In the Narrinyeri tribe offenders were brought before the *Tendi* (council of old men) for trial. For instance, if a member of one clan had been in time of peace killed by one of another clan, the clansmen of the latter would send to the friends of the murderer, and invite them to bring him for trial before the united Tendis. If, after trial, he were found guilty of committing the crime, he would be punished according to his guilt; if it were murder, he would be handed over to his clansmen to be put to death by spearing; if for what we should call "manslaughter," he would receive a good thrashing or be banished from his clan, or be compelled to go to his mother's relations. A common sentence for any public offence was so many blows on the head. I was not informed by Mr. Taplin what he included in the term "public offence." . . . .—A. W. Howitt, *Native Tribes of South-East Australia*, 295–341.

THE AUTHORITY OF OLD MEN IN AUSTRALIA

. . . . Within the narrow limits of his own group the local head man or Alatunja takes the lead; outside of his group no head man has of necessity any special power. If he has any generally-recognised authority, as some of them undoubtedly have, this is due to the fact that he is either the head of a numerically important group or is himself famous for his skill in hunting or fighting, or for his knowledge of the ancient traditions and customs of the tribe. Old age does not by itself confer distinction, but only when combined with special ability. There is no such thing as a chief of the tribe, nor indeed is there any individual to whom the term chief can be applied.

The authority which is wielded by an Alatunja is of a somewhat vague nature. He has no definite power over the persons of the individuals who are members of his group. He it is who calls together the elder men, who always consult concerning any important business, such as the holding of sacred ceremonies or the punishment of individuals who have broken tribal custom, and his opinion carries an amount of weight which depends upon his reputation. He is not of necessity recognised as the most important member of the council whose judgment must be followed, though, if he be old and distinguished, then he will have great influence. Perhaps the best way of expressing the matter is to say that the Alatunja has, *ex-officio,* a position which, if he be a man of personal ability, but only in that case, enables him to wield considerable power not only over the members of his own group, but over those of neighbouring groups whose head men are inferior in personal ability to himself.

The Alatunja is not chosen for the position because of his ability, the post is one which, within certain limits, is hereditary, passing from father to son, always provided that the man is of proper designation—that is, for example, in a kangaroo group the Alatunja must of necessity be a kangaroo man. To take the Alice Springs group as an example, the holder of the office must be a witchetty grub man, and he must also be old enough to be considered capable of taking the lead in certain ceremonies, and must of necessity be a fully initiated man. The present

Alatunja inherited the post from his father, who had previously inherited it from his father. The present holder has no son who is yet old enough to be an Alatunja, so that if he were to die within the course of the next two or three years his brother would hold the position, which would, however, on the death of this brother, revert to the present holder's son. It of course occasionally happens that the Alatunja has no son to succeed him, in which case he will before dying nominate the individual whom he desires to succeed him, who will always be either a brother or a brother's son. The Alatunjaship always descends in the male line, and we are not aware of anything which can be regarded as the precise equivalent of this position in other Australian tribes, a fact which is to be associated with the strong development of the local groups in this part of the continent.

The most important function of the Alatunja is to take charge of what we may call the sacred store-house, which has usually the form of a cleft in some rocky range, or a special hole in the ground, in which, concealed from view, are kept the sacred objects of the group. Near to this store-house, which is called an *Ertnatulunga,* no woman, child, or uninitiated man dares venture on pain of death.

At intervals of time, and when determined upon by the Alatunja, the members of the group perform a special ceremony, called *Intichiuma,* which will be described later on in detail, and the object of which is to increase the supply of the animal or plant bearing the name of the particular group which performs the ceremony. Each group has an *Intichiuma* of its own, which can only be taken part in by initiated men bearing the group name. In the performance of this ceremony the Alatunja takes the leading part; he it is who decides when it is to be performed, and during the celebration the proceedings are carried out under his direction, though he has, while conducting them, to follow out strictly the customs of his ancestors.

As amongst all savage tribes the Australian native is bound hand and foot by custom. What his fathers did before him that he must do. If during the performance of a ceremony his ancestors painted a white line across the forehead, that line he must paint. Any infringement of custom, within certain limita-

tions, is visited with sure and often severe punishment. At the same time, rigidly conservative as the native is, it is yet possible for changes to be introduced. We have already pointed out that there are certain men who are especially respected for their ability, and after watching large numbers of the tribe, at a time when they were assembled together for months to perform certain of their most sacred ceremonies, we have come to the conclusion that at a time such as this, when the older and more powerful men from various groups are met together, and when day by day and night by night around their camp fires they discuss matters of tribal interest, it is quite possible for changes of custom to be introduced. At the present moment, for example, an important change in tribal organisation is gradually spreading through the tribe from north to south. Every now and then a man arises of superior ability to his fellows. When large numbers of the tribe are gathered together—at least it was so on the special occasion to which we allude—one or two of the older men are at once seen to wield a special influence over the others. Everything, as we have before said, does not depend upon age. At this gathering, for example, some of the oldest men were of no account; but, on the other hand, others not so old as they were, but more learned in ancient lore or more skilled in matters of magic, were looked up to by the others, and they it was who settled everything. It must, however, be understood that we have no definite proof to bring forward of the actual introduction by this means of any fundamental change of custom. The only thing that we can say is that, after carefully watching the natives during the performance of their ceremonies and endeavouring as best we could to enter into their feelings, to think as they did, and to become for the time being one of themselves, we came to the conclusion that if one or two of the most powerful men settled upon the advisability of introducing some change, even an important one, it would be quite possible for this to be agreed upon and carried out. That changes have been introduced, in fact, are still being introduced, is a matter of certainty; the difficulty to be explained is, how in face of the rigid conservatism of the native, which may be said to be one of his leading features, such changes can possibly even be mooted. The only possible

chance is by means of the old men, and, in the case of the Arunta people, amongst whom the local feeling is very strong, they have opportunities of a special nature. Without belonging to the same group, men who inhabit localities close to one another are more closely associated than men living at a distance from one another, and, as a matter of fact, this local bond is strongly marked—indeed so marked was it during the performance of their sacred ceremonies that we constantly found it necessary to use the term "local relationship." Groups which are contiguous locally are constantly meeting to perform ceremonies; and among the Alatunjas who thus come together and direct proceedings there is perfectly sure, every now and again, to be one who stands pre-eminent by reason of superior ability, and to him, especially on an occasion such as this, great respect is always paid. It would be by no means impossible for him to propose to the other older men the introduction of a change, which, after discussing it, the Alatunjas of the local groups gathered together might come to the conclusion was a good one, and, if they did so, then it would be adopted in that district. After a time a still larger meeting of the tribe, with head men from a still wider area—a meeting such as the Engwura [which is described in Part II, p. 255]—might be held. At this the change locally introduced would, without fail, be discussed. The man who first started it would certainly have the support of his local friends, provided they had in the first instance agreed upon the advisability of its introduction, and not only this, but the chances are that he would have the support of the head men of other local groups of the same designation as his own. Everything would, in fact, depend upon the status of the original proposer of the change; but, granted the existence of a man with sufficient ability to think out the details of any change, then, owing partly to the strong development of the local feeling, and partly to the feeling of kinship between groups of the same designation, wherever their local habitation may be, it seems quite possible that the markedly conservative tendency of the natives in regard to customs handed down to them from their ancestors may every now and then be overcome, and some change, even a radical one, be introduced. The traditions of the tribe indicate, it may be

noticed, their recognition of the fact that customs have varied from time to time. They have, for example, traditions dealing with supposed ancestors, some of whom introduced, and others of whom changed, the method of initiation. Tradition also indicates ancestors belonging to particular local groups who changed an older into the present marriage system, and these traditions all deal with special powerful individuals by whom the changes were introduced. It has been stated by writers such as Mr. Curr "that the power which enforces custom in our tribes is for the most part an impersonal one." Undoubtedly public opinion and the feeling that any violation of tribal custom will bring down upon the guilty person the ridicule and opprobrium of his fellows is a strong, indeed a very strong, influence; but at the same time there is in the tribes with which we are personally acquainted something beyond this. Should any man break through the strict marriage laws, it is not only an "impersonal power" which he has to deal with. The head men of the group or groups concerned consult together with the elder men, and, if the offender, after long consultation, be adjudged guilty and the determination be arrivèd at that he is to be put to death—a by no means purely hypothetical case—then the same elder men make arrangements to carry the sentence out, and a party, which is called an *"ininja,"* is organised for the purpose. The offending native is perfectly well aware that he will be dealt with by something much more real than an "impersonal power." . . . .
—Spencer and Gillen, *Native Tribes of Central Australia,* 10–15.

[TRIBAL SECRET SOCIETIES]

The operation of the various motives which explains the formation of tribal societies explains also the assumption by them of various functions of an important nature. They arouse the universal sentiments of curiosity, fear, and awe; they surround themselves with that veil of mystery so attractive to primitive minds the world over, and they appeal with ever growing power to the social and convivial aspects of human nature, to feeling of prestige and exclusiveness, and to the consciousness of the very material privileges connected with membership. Under

these circumstances it is natural to find secret societies of the tribal type widespread among savage and barbarous peoples. By the side of the family and the tribe they provide another organization which possesses still greater power and cohesion. In their developed form they constitute the most interesting and characteristic of primitive social institutions.

In communities destitute of wider social connections, such societies help to bring about a certain consciousness of fellowship and may often, by their ramifications throughout different tribes, become of much political importance. African societies supply pertinent examples. Among the Korannas of South Africa, a fraternity exists whose initiates are marked by three cuts on the chest. Said one of their members to an inquirer: "'I can go through all the valleys inhabited by Korannas and by Griquas, and wherever I go, when I open my coat and show these three cuts, I am sure to be well received.'" After a *Nkimba* novice has acquired the secret language and has become a full member, he is called *Mbwamvu anjata*, and the members in the other districts "hail him as a brother, help him in his business, give him hospitality, and converse freely with him in the mystic language." Those who belong to the *Idiong* of Old Calabar are thereby enabled to travel through the country without danger. Representatives of the *Ukuku*, a society found among the tribes in the Spanish territory north of Corisco Bay, sometimes "meet together and discuss intertribal difficulties, thereby avoiding war." *Mwetyi*, who presides over the secret society of the Shekani and Bakele of French Congo, is always invoked as a witness to covenants between neighboring tribes. Such treaties are usually kept; otherwise *Mwetyi* would visit the violators and punish them. The *Purrah* of Sierra Leone was formerly a most effective instrument for preventing conflicts between the tribes; its deputations sent out to make peace were always respected. The society was organized with a headman in every district who presided over the local and subordinate councils. A grand council, managed by the Head *Purrah* man, had jurisdiction over all the branches of the society. While the *Purrah* law was in force, no blood must be shed by contending tribes. Transgressors were punished by death.

In the absence of the stronger political ties afforded by the existence of a definite chieftainship, or where the chief is as yet endowed with little power, the secret societies assume or reënforce his functions of social control. Where the societies are still essentially tribal in character, and in their membership include nearly all the men of the tribe, such authority naturally centres itself in those who hold the higher degrees. Probably the earliest ruler is often only the individual highest in the secret society; his power derived from his association with it and his orders executed by it. Thus the control exercised by the New Pomerania chieftains is immensely strengthened by the circumstance that such individuals are always high in the secrets of the *Dukduk*. In some places the society seems to be largely under the power of the chiefs. The importance among Melanesian peoples of the *Suqe* and *Tamate* of Banks Islands has always obscured the appearance of such power as the chiefs would be expected to exercise. Any man who was conspicuous in his community would certainly be high in the degrees of these societies; and no one who held an insignificant place in them could have much power outside.

With growing political centralization, the judicial and executive functions of the secret society may be retained; and its members, as the personal agents of the ruling chief, may constitute the effective police of the state. Africa affords us instances of such societies in affiliation with the government. Members of the *Sindungo* order of Kabinda were originally secret agents of the king, and as such were employed to gather information and accuse powerful masters who were unjust to their inferiors. The king of the Bashi-lange-Baluba nation (Congo Free State) is *ex-officio* head of *Lubuku*. *Belli-paaro* among the Quojas of Liberia had the chief or king of the tribe at its head. Members were in close affiliation with the government. Such centralization of political power is not accomplished, however, without a struggle. These societies often put many restrictions upon the influence of the chiefs. *Ogboni*, among the Egbas of Yoruba, is more powerful than the king. The *Nkimba* fraternity likewise once formed a useful check to the greed and violence of the chiefs.

Where these societies are powerful their members enjoy many privileges which are not granted their less fortunate tribesmen. In the *Dukduk* mysteries "everything which by the uninitiated is held as of particular obligation is here chanted as something that the initiated must rigidly impress upon the profane, yet which for themselves they may disregard. The *tabu* is to have no force for them except the great *tabu,* with a flock of hair on it, and that they must not break through. All others they may transgress, if only they do it slily, and so as not to raise public scandal among the women and the others who are bound by its provisions. They must teach the uninitiated that there are malign spirits abroad by night, but they themselves need not believe anything so stupid. . . . One only belief do they profess, and that is in the spirit of the volcano-fires, and even that is discarded by the inner degree of the *Dukduk,* those half-dozen men who sit within the mystic house and dupe the initiates of the minor degree as all unite to trick those outside. And the reason is this: the half-dozen members of the most secret rank profess to one another that no better system of governing a savage community could be devised than this ceremonial mystery of the *Dukduk.* All the *Tamate* associations of the Banks Islands have as their particular badge a leaf of the croton or a hibiscus flower. To wear the badge without being a member of a *Tamate* society would subject the offender to a fine and a beating. A member of this society, by marking with his badge the fruit trees or garden which he wishes reserved for any particular use, may be sure that his taboo wil be respected; the great *Tamate* is behind him. Other prerogatives of the members in Melanesian societies include "the right to land in certain portions of the beach, which the uninitiated were prevented from doing save by the payment of a fine—the right of way along certain parts—and, above all, a share in the fines in food and money from their less-privileged fellow-countrymen or visitors." *Purrah* of Sierra Leone places its interdict "upon trees, streams, fishing-pots, fruit trees, oil palms, bamboo palms, growing crops, and in fact upon all and everything that is required to be reserved for any particular use."

Privileges such as these readily pass over into a much more extended system of social control. Ruling chiefly by the mys

terious terror they inspire, and providing for infractions of their laws the penalties of death or heavy fines, the tribal societies of Melanesia and Africa represent the most primitive efforts towards the establishment of law and order. They recall the Vehmgerichte which flourished in Westphalia in the fourteenth and fifteenth centuries, or the Vigilantes and White Caps of a more modern age.

One of the most powerful of these organizations—the *Dukduk* of the Bismarck Archipelago—exhibits at once the good and bad features of the tribal society. In its judicial capacity it fully merits its description as an "internationale Rechtsgesellschaft," providing in the midst of conditions, otherwise anarchical, some semblance of law and order. Where the *Dukduk* prevails, the natives are afraid to commit any serious felony. One observer describes the *Dukduk* as the administrator of law, judge, policeman, and hangman all in one. But the *Dukduk* conception of justice is not modelled on Ulpian's famous definition, for the *Dukduk* law bears down most unequally upon the weaker members of the community, upon those who for one reason or another have been unable to join the society or have incurred the enmity of its powerful associates. Its forced contributions impoverish those who are already poor, while those who are rich enough to join share in the profits of the mystery. The fraternity exhibits in the clearest light the culmination of that process of fraud and intimidation which, having its roots in the puberty institution, becomes more and more prominent when the tribal society stage is reached.

"There is," writes Mr. Romilly, who witnessed some *Dukduk* initiations, "a most curious and interesting institution, by which the old men of the tribe band themselves together, and, by working on the superstitions of the rest, secure for themselves a comfortable old age and unbounded influence. . . . . The *Dukduk* is a spirit, which assumes a visible and presumably tangible form, and makes its appearance at certain fixed times. Its arrival is invariably fixed for the day the new moon becomes visible. It is announced a month beforehand by the old men, and is always said to belong to one of them. During that month great preparations of food are made, and should any young man

have failed to provide an adequate supply on the occasion of its last appearance, he receives a pretty strong hint to the effect that the *Dukduk* is displeased with him, and there is no fear of his offending twice. When it is remembered that the old men, who alone have the power of summoning the *Dukduk* from his home at the bottom of the sea, are too weak to work, and to provide themselves with food or *dewarra* the reason for this hint seems to me pretty obvious. The day before the *Dukduk's* expected arrival the women usually disappear, or at all events remain in their houses. It is immediate death for a woman to look upon this unquiet spirit. Before daybreak every one is assembled on the beach, most of the young men looking a good deal frightened. They have many unpleasant experiences to go through during the next fortnight, and the *Dukduk* is known to possess an extraordinary familiarity with all their shortcomings of the preceding month. At the first streak of dawn, singing and drum-beating is heard out at sea, and, as soon as there is enough light to see them, five or six canoes, lashed together with a platform built over them, are seen to be slowly advancing towards the beach. Two most extraordinary figures appear dancing on the platform, uttering shrill cries, like a small dog yelping. They seem to be about ten feet high, but so rapid are their movements that it is difficult to observe them carefully. However, the outward and visible form assumed by them is intended to represent a gigantic cassowary, with the most hideous and grotesque of human faces. The dress, which is made of the leaves of the *draconæna,* certainly looks much like the body of this bird, but the head is like nothing but the head of a *Dukduk.* It is a conical-shaped erection, about five feet high, made of very fine basket work, and gummed all over to give a surface on which the diabolical countenance is depicted. No arms or hands are visible, and the dress extends down to the knees. The old men, doubtless, are in the secret, but by the alarmed look on the faces of the others it is easy to see that they imagine that there is nothing human about these alarming visitors. As soon as the canoes touch the beach, the two *Dukduks* jump out, and at once the natives fall back, so as to avoid touching them. If a *Dukduk* is touched, even by accident, he very frequently tomahawks the unfortunate native on the

spot. After landing, the *Dukduks* dance round each other, imitating the ungainly motion of the cassowary, and uttering their shrill cries. During the whole of their stay they make no sound but this. It would never do for them to speak, for in that case they might be recognized by their voices. Nothing more is to be done now till evening, and they occupy their time running up and down the beach, through the village, and into the bush, and seem to be very fond of turning up in the most unexpected manner, and frightening the natives half out of their wits. During the day a little house has been built in the bush, for the *Dukduk's* benefit. No one but the old men knows exactly where this house is, as it is carefully concealed. Here we may suppose the restless spirit unbends to a certain extent, and has his meals. Certainly no one would venture to disturb him. In the evening a vast pile of food is collected, and is borne off by the old men into the bush, every man making his contribution to the meal. The *Dukduk,* if satisfied, maintains a complete silence; but if he does not think the amount collected sufficient, he shows his disapprobation by yelping and leaping. When the food has been carried off, the young men have to go through a very unpleasant ordeal, which is supposed to prepare their minds for having the mysteries of the *Dukduk* explained to them at some very distant period. They stand in rows of six or seven, holding their arms high above their heads. When the *Dukduks* appear from their house in the bush, one of them has a bundle of stout canes, about six feet long, and the other a big club. The *Dukduk* with the canes selects one of them, and dances up to one of the young men, and deals him a most tremendous blow, which draws blood all round his body. There is, however, on the young man's part no flinching or sign of pain. After the blow with the cane he has to stoop down, and the other *Dukduk* gives him a blow with the club, on the 'tail,' which must be most unpleasant. Each of these young men has to go through this performance some twenty times in the course of the evening, and go limping home to bed. He will nevertheless be ready to place himself in the same position every night for the next fortnight. The time of a man's initiation may and often does last for about twenty years, and as the *Dukduk* usually appears at every town six times in

every year, the novice has to submit to a considerable amount of flogging to purchase his freedom of the guild. Though I have never witnessed it, the *Dukduk* has the right, which he frequently exercises, of killing any man on the spot. He merely dances up to him, and brains him with a tomahawk or club. Not a man would dare dispute this right, nor would any one venture to touch the body afterwards. The *Dukduks* in such a case pick up the body, and carry it into the bush where it is disposed of: how, one can only conjecture. Women, if caught suddenly in the bush, are carried off, and never appear again, nor are any inquiries made after them. It is no doubt this power the *Dukduks* possess, of killing either man or woman with impunity, which makes them so feared. It is, above all things, necessary to preserve the mystery, and the way in which this is done is very clever. The man personating the *Dukduk* will retire to his house, take off his dress, and mingle with the rest of his tribe, so as not to be missed, and will put his share of food into the general contribution, thus making a present to himself. The last day on which the moon is visible the *Dukduks* disappear, though no one sees them depart; their house in the bush is burned, and the dresses they have worn are destroyed. Great care is taken to destroy everything they have touched, the canes and clubs being burned every day by the old men.

The *Dukduk* society also finds a fertile source of revenue in its exactions upon the women. In the Bismarck Archipelago, women have the full custody of their earnings and as they work harder than the men, they soon acquire considerable property. The *Dukduk* "offers a very good means of preventing unfair accumulation of wealth in the hands of the women." If a woman sees the *Dukduk* masks, she is fined a certain quantity of *dewarra*. The *Taraiu*, or lodge, is always tabooed to women, and a fine of thirty to fifty *dewarra* is imposed upon the curious intruder.

Many of the West African societies Miss Kingsley describes as admirable engines of government; "the machine as a machine for the people is splendid; it can tackle a tyrannous chief, keep women in order, and even regulate pigs and chickens, as nothing else has been able to do in West Africa." As the African initiate passes from grade to grade, the secrets of the society are gradu-

ally revealed to him. "Each grade gives him a certain function in carrying out the law, and finally when he has passed through all the grades, which few men do, when he has finally sworn the greatest oath of all, when he knows all the society's heart's secret, that secret is 'I am what I am'—the one word. The teaching of that word is law, order, justice, morality. Why the *one word* teaches it the man who has reached the innermost heart of the secret society does not know, but he knows two things—one, that there is a law god, and the other that, so says the wisdom of our ancestors, his will must be worked or evil will come; so in his generation he works to keep the young people straight—to keep the people from over-fishing the lagoons, to keep the people from cutting palm nuts, and from digging yams at wrong seasons. He does these things by putting *Purroh,* or *Oru,* or *Egbo* on them; *Purroh, Oru,* and *Egbo* and *Idiong* are things the people fear."

Egbo of Old Calabar, perhaps the best-developed of these societies, is divided into numerous grades. The highest of these grades is the *Grand Egbo,* whose head is the king of the country. Over the other grades preside chiefs who are called the kings of their particular *Egbo.* Each of the different grades has its *Egbo* day when the *Idem,* or spiritual representatives of *Egbo,* are in full control. When the yellow flag floats from the king's house, it is Brass *Egbo* day. Only those who belong to the very highest degrees may then be seen in the streets. During an *Egbo* visitation it would be death for any one not a member of the order to venture forth; even members themselves, if their grade is lower than that which controls the proceedings for the day, would be severely whipped. When a man "meets the paraphernalia of a higher grade of *Egbo* than that to which he belongs, he has to act as if he were lame, and limp along past it humbly, as if the sight of it had taken all the strength out of him." Though the society is in many cases an agent of much oppression, it seemingly does not lack its good side. It has jurisdiction over all crimes except witchcraft. Its procedure is especially interesting. A person "with a grievance in a district under *Egbo* has only to rush into the street, look out for a gentleman connected with the *Egbo* Society, slap him on the waistcoat place, and that

gentleman has then and there at once to drop any private matter of his own he may be engaged in, call together the Grade of *Egbo* he belongs to—there are eleven grades of varying power—and go into the case. Or, if an *Egbo* gentleman is not immediately get-at-able, the complainant has only to rush to the *Egbo* House —there is one in every town—and beat the *Egbo* drum, and out comes the *Egbo* Grade, who have charge for that day." The offender will then be promptly punished, or the complainant himself, if the offence be trivial. Calabar people who find it necessary to be absent on a journey, place their property under the protection of *Egbo* by fastening the badge of the society to their houses. A trader, whether a European or an influential Effik, usually joins the society and endeavors to reach the higher degrees. Lower grades cannot call out *Egbo* to proceed against higher grades; debtors belonging to such classes "flip their fingers at lower grade creditors." But a trader can call out his own class of *Egbo* "and send it against those of his debtors who may be of lower grades, and as the *Egbo* methods of delivering its orders to pay up consist in placing *Egbo* at a man's door-way, and until it removes itself from the doorway the man dare not venture outside his house, it is most successful."

Other African societies exhibit functions similar to those of *Egbo*. *Sindungo* of the Loango tribes is employed for debt-collecting purposes. Any man who has a debt outstanding against another may complain to the head of the society. The masked *Sindungo* are then sent out to demand payment. Their simple procedure consists in wholesale robbery of the debtor's property if the proper sums are not immediately forthcoming. The *Zangbeto* of Porto Novo constitutes the night police. The young men of the upper class who compose the society have the right to arrest any one in town and out of doors after nine o'clock in the evening. The organization is a valuable safeguard against robberies and incendiary fires. In Lagos, criminals condemned to death are given over to *Oro,* who is said to devour the bodies; their clothes are afterward found entangled in the branches of lofty trees. Sometimes the headless corpse of one of these unfortunates is left in the forest on the outskirts of the town· no one would dare to bury it. *Ogboni,* a powerful society in most

parts of the Yoruba country, in Ibadan, is little more than the public executioner. *Egungun* and *Belli-paaro* have similar duties. *Nkimba* members employ themselves in catching witches. At night they fill the village with their cries as they run through the deserted streets. Common natives must not be caught outside the house, but despite this regulation, the simple folk "rejoice that there is such an active police against witches, maladies, and all misfortunes."

The problem of maintaining masculine authority over the women is readily solved in Africa, where the secret societies are powerful. An account, by an old writer, of the famous *Mumbo Jumbo* order found among the Mandingoes of the Soudan, furnishes a good description of the procedure followed by numerous other societies:—

"On the 6th of May, at Night, I was visited by a *Mumbo Jumbo,* an Idol, which is among the Mundingoes a kind of cunning Mystery. It is dressed in a long Coat made of the Bark of Trees, with a Tuft of fine Straw on the Top of it, and when the Person wears it, it is about eight or nine Foot high. This is a Thing invented by the Men to keep their Wives in awe, who are so ignorant (or at least are obliged to pretend to be so) as to take it for a Wild Man; and indeed no one but what knows it, would take it to be a Man, by reason of the dismal Noise it makes, and which but few of the Natives can manage. It never comes abroad but in the Night-time, which makes it have the better Effect. Whenever the Men have any Dispute with the Women, this *Mumbo Jumbo* is sent for to determine it; which is, I may say, always in Favour of the Men. Whoever is in the Coat, can order the others to do what he pleases, either fight, kill, or make Prisoner; but it must be observed, that no one is allowed to come armed into its Presence. When the women hear it coming, they run away and hide themselves; but if you are acquainted with the Person that has the Coat on, he will send for them all to come and sit down, and sing or dance, as he pleases to order them; and if any refuse to come, he will send the People for them, and then whip them. Whenever any one enters into this Society, they swear in the most solemn manner never to divulge it to any Woman, or any Person that is not enter'd into it, which they

never allow to Boys under sixteen Years of Age. This thing the People swear by, and the Oath is so much observed by them, that they reckon as irrevocable, as the Grecians thought Jove did of old, when he swore by the River Styx. . . . . There are very few Towns of any Note but what have got one of these Coats, which in the Daytime is fixt upon a large Stick near the Town, where it continues till Night, the proper Time of using it." Mungo Park, who witnessed the procedure of the society, adds that when a woman is to be punished for a real or suspected departure from the path of virtue, she "is stripped naked, tied to a post, and severely scourged with Mumbo's rod, amidst the shouts and derision of the whole assembly; and it is remarkable, that the rest of the women are the loudest in their exclamations on this occasion against their unhappy sister."

In the Yoruba villages *Oro* is the great bugbear god. The *Ogboni* society, whose members are the personal representatives of the god, use the bull-roarer, the voice of *Oro,* to keep the women in subjection. No woman may see the bull-roarer and live. Governor Moloney says, "I have seen even persons professing to be Christians awe-struck in its presence." The presence of *Oro* in Yoruba towns brings about an enforced seclusion of women from seven o'clock in the evening until five o'clock in the morning. On the great *Oro* days women must remain indoors from daybreak till noon. *Egungun* (literally "Bones"), another Yoruba bugbear, is supposed to be a dead man risen from the grave. He is "the whip and the cucking-stool apotheosized." Adult males know that *Egungun* is a mortal, "but if a woman swears falsely by him, or even says that he is not a tenant of the grave, she would lose her life." *Mwetyi* and *Nda* of Southern Guinea tribes are similar creations of the secret societies to keep the women in subjection.—Hutton Webster, *Primitive Secret Societies,* 106–20. (Copyright by The Macmillan Co., 1908.)

THE IROQUOIS CONFEDERACY

. . . . The Iroquois have furnished an excellent illustration of the manner in which a confederacy is formed by natural growth sisted by skillful legislation. Originally emigrants from beyond the Mississippi, and probably a branch of the Dakota stock, they

first made their way to the valley of the St. Lawrence and settled themselves near Montreal. Forced to leave this region by the hostility of surrounding tribes, they sought the central region of New York. Coasting the eastern shore of Lake Ontario in canoes, for their numbers were small, they made their first settlement at the mouth of the Oswego river, where, according to their traditions, they remained for a long period of time. They were then in at least three distinct tribes, the Mohawks, the Onondagas, and the Senecas. One tribe subsequently established themselves at the head of the Canandaigua lake and became the Senecas. Another tribe occupied the Onondaga Valley and became the Onondagas. The third passed eastward and settled first at Oneida near the site of Utica, from which place the main portion removed to the Mohawk Valley and became the Mohawks. Those who remained became the Oneidas. A portion of the Onondagas or Senecas settled along the eastern shore of the Cayuga lake and became the Cayugas. New York, before its occupation by the Iroquois, seems to have been a part of the area of the Algonkin tribes. According to Iroquois traditions they displaced its anterior inhabitants as they gradually extended their settlements eastward to the Hudson, and westward to the Genesee. Their traditions further declare that a long period of time elapsed after their settlement in New York before the confederacy was formed, during which they made common cause against their enemies and thus experienced the advantages of the federal principle both for aggression and defense. They resided in villages, which were usually surrounded with stockades, and subsisted upon fish and game, and the products of a limited horticulture. In numbers they did not at any time exceed 20,000 souls, if they ever reached that number. Precarious subsistence and incessant warfare repressed numbers in all the aboriginal tribes, including the Village Indians as well. The Iroquois were enshrouded in the great forests, which then overspread New York, against which they had no power to contend. They were first discovered A. D. 1608 About 1675, they attained their culminating point when their dominion reached over an area remarkably large, covering the greater parts of New York, Pennsylvania, and Ohio, and portions of Canada north of Lake On-

tario. At the time of their discovery they were the highest representatives of the Red Race north of New Mexico in intelligence and advancement, although perhaps inferior to some of the Gulf tribes in the arts of life. In the extent and quality of their mental endowments they must be ranked among the highest Indians in America. . . . .

When the confederacy was formed, about A. D. 1400–1450, ... the Iroquois in five independent tribes, occupied territories contiguous to each other, and spoke dialects of the same language which were mutually intelligible. Beside these facts certain gentes were common in the several tribes as has been shown. In their relations to each other, as separate parts of the same gens, these common gentes afforded a natural and enduring basis for a confederacy. With these elements existing, the formation of a confederacy became a question of intelligence and skill. Other tribes in large numbers were standing in precisely the same relations in different parts of the continent without confederating. The fact that the Iroquois tribes accomplished the work affords evidence of their superior capacity. Moreover, as the confederacy was the ultimate stage of organization among the American aborigines its existence would be expected in the most intelligent tribes only.

It is affirmed by the Iroquois that the confederacy was formed by a council of wise-men and chiefs of the five tribes which met for that purpose on the north shore of Onondaga lake, near the site of Syracuse; and that before its session was concluded the organization was perfected, and set in immediate operation. At their periodical councils for raising up sachems they still explain its origin as the result of one protracted effort of legislation. It was probably a consequence of a previous alliance for mutual defense, the advantages of which they had perceived and which they sought to render permanent.

The origin of the plan is ascribed to a mythical, or, at least, traditionary person, *Hä-yo-went'-hä,* the Hiawatha of Longfellow's celebrated poem, who was present at this council and the central person in its management. In his communications with the council he used a wise-man of the Onondagas, *Da-gä-no-we'-dä,* as an interpreter and speaker to expound the structure and

principles of the proposed confederacy. The same tradition further declares that when the work was accomplished *Hä-yo-went'-hä* miraculously disappeared in a white canoe, which arose with him in the air and bore him out of their sight. Other prodigies, according to this tradition, attended and signalized the formation of the confederacy, which is still celebrated among them as a masterpiece of Indian wisdom. Such in truth it was; and it will remain in history as a monument of their genius in developing gentile institutions. It will also be remembered as an illustration of what tribes of mankind have been able to accomplish in the art of government while in the Lower Status of barbarism, and under the disadvantages this condition implies.

Which of the two persons was the founder of the confederacy it is difficult to determine. The silent *Hä-yo-went'-hä* was, not unlikely, a real person of Iroquois lineage; but tradition has enveloped his character so completely in the supernatural that he loses his place among them as one of their number. If Hiawatha were a real person, *Da-gä-no-we'-dä* must hold a subordinate place; but, if a mythical person invoked for the occasion, then to the latter belongs the credit of planning the confederacy.

The Iroquois affirm that the confederacy as formed by this council, with its powers, functions, and mode of administration, has come down to them through many generations to the present time with scarcely a change in its internal organization. When the Tuscaroras were subsequently admitted, their sachems were allowed by courtesy to sit as equals in the general council, but the original number of sachems was not increased, and in strictness those of the Tuscaroras formed no part of the ruling body.

The general features of the Iroquois Confederacy may be summarized in the following propositions:

I. The confederacy was a union of Five Tribes, composed of common gentes, under one government on the basis of equality; each Tribe remaining independent in all matters pertaining to local self-government.

II. It created a General Council of Sachems, who were limited in number, equal in rank and authority, and invested with supreme powers over all matters pertaining to the Confederacy.

III. Fifty Sachemships were created and named in perpetuity in certain gentes of the several Tribes; with power in these gentes to fill vacancies as often as they occurred, by election from among their respective members, and with the further power to depose from office for cause; but the right to invest these Sachems with office was reserved to the General Council.

IV. The Sachems of the Confederacy were also Sachems in their respective Tribes, and with the Chiefs of these Tribes formed the Council of each, which was supreme over all matters pertaining to the Tribe exclusively.

V. Unanimity in the Council of the Confederacy was made essential to every public act.

VI. In the General Council the Sachems voted by Tribes, which gave to each Tribe a negative upon the others.

VII. The Council of each Tribe had power to convene the General Council; but the latter had no power to convene itself.

VIII. The General Council was open to the orators of the people for the discussion of public questions; but the Council alone decided.

IX. The Confederacy had no chief Executive Magistrate, or official head.

X. Experiencing the necessity for a General Military Commander they created the office in a dual form, that one might neutralize the other. The two principal War-chiefs created were made equal in powers.

These several propositions will be considered and illustrated, but without following the precise form or order in which they are stated.

At the institution of the confederacy fifty permanent sachemships were created and named, and made perpetual in the gentes to which they were assigned. With the exception of two, which were filled but once, they have been held by as many different persons in succession as generations have passed away between that time and the present. The name of each sachemship is also the personal name of each sachem while he holds the office, each one in succession taking the name of his predecessor. These sachems, when in session, formed the council of the confederacy in which the legislative, executive, and judicial powers were

vested, although such a discrimination of functions had not come to be made. To secure order in the succession, the several gentes in which these offices were made hereditary were empowered to elect successors from among their respective members when vacancies occurred, as elsewhere explained. As a further measure of protection to their own body each sachem, after his election and its confirmation, was invested with his office by a council of the confederacy. When thus installed his name was "taken away" and that of the sachemship was bestowed upon him. By this name he was afterwards known among them. They were all upon equality in rank, authority, and privileges.

These sachemships were distributed unequally among the five tribes; but without giving to either a preponderance of power; and unequally among the gentes of the last three tribes. The Mohawks had nine sachems, the Oneidas nine, the Onondagas fourteen, the Cayugas ten, and the Senecas eight. This was the number at first, and it has remained the number to the present time.

Two of these sachemships have been filled but once since their creation. *Hä-yo-went'-hä* and *Da-gä-no-we'-da* consented to take the office among the Mohawk sachems, and to leave their names in the list upon condition that after their demise the two should remain thereafter vacant. They were installed upon these terms, and the stipulation has been observed to the present day. At all councils for the investiture of sachems their names are still called with the others as a tribute of respect to their memory. The general council, therefore, consisted of but forty-eight members.

Each sachem had an assistant sachem, who was elected by the gens of his principal from among its members, and who was installed with the same forms and ceremonies. He was styled an "aid." It was his duty to stand behind his superior on all occasions of ceremony, to act as his messenger, and in general to be subject to his directions. It gave to the aid the office of chief, and rendered probable his election as the successor of his principal after the decease of the latter. In their figurative language these aids of the sachems were styled "Braces in the Long House," which symbolized the confederacy.

The names bestowed upon the original sachems became the names of their respective successors in perpetuity. For example, upon the demise of *Gä-ne-o-dï'-yo,* one of the eight Seneca sachems, his successor would be elected by the Turtle gens in which this sachemship was hereditary, and when raised up by the general council he would receive this name, in place of his own, as a part of the ceremony. On several different occasions I have attended their councils for raising up sachems both at the Onondaga and Seneca reservations, and witnessed the ceremonies herein referred to. Although but a shadow of the old confederacy now remains, it is fully organized with its complement of sachems and aids, with the exception of the Mohawk tribe which removed to Canada about 1775. Whenever vacancies occur their places are filled, and a general council is convened to install the new sachems and their aids. The present Iroquois are also perfectly familiar with the structure and principles of the ancient confederacy.

For all purposes of tribal government the five tribes were independent of each other. Their territories were separated by fixed boundary lines, and their tribal interests were distinct. The eight Seneca sachems, in conjunction with the other Seneca chiefs, formed the council of the tribe by which its affairs were administered, leaving to each of the other tribes the same control over their separate interests. As an organization the tribe was neither weakened nor impaired by the confederate compact. Each was in vigorous life within its appropriate sphere, presenting some analogy to our own states within an embracing republic. It is worthy of remembrance that the Iroquois commended to our forefathers a union of the colonies similar to their own as early as 1755. They saw in the common interests and common speech of the several colonies the elements for a confederation, which was as far as their vision was able to penetrate.

The tribes occupied positions of entire equality in the confederacy in rights, privileges, and obligations. Such special immunities as were granted to one or another indicate no intention to establish an unequal compact, or to concede unequal privileges. There were organic provisions apparently investing particular tribes with superior power; as, for example, the Onondagas

were allowed fourteen sachems and the Senecas but eight; and a larger body of sachems would naturally exercise a stronger influence in council than a smaller. But in this case it gave no additional power, because the sachems of each tribe had an equal voice in forming a decision, and a negative upon the others. When in council they agreed by tribes, and unanimity in opinion was essential to every public act. The Onondagas were made "Keepers of the Wampum," and "Keepers of the Council Brand," the Mohawks, "Receivers of Tribute" from subjugated tribes, and the Senecas "Keepers of the Door" of the Long House. These and some other similar provisions were made for the common advantage.

The cohesive principle of the confederacy did not spring exclusively from the benefits of an alliance for mutual protection, but had a deeper foundation in the bond of kin. The confederacy rested upon the tribes ostensibly, but primarily upon common gentes. All the members of the same gens, whether Mohawks, Oneidas, Onondagas, Cayugas, or Senecas, were brothers and sisters to each other in virtue of their descent from the same common ancestor; and they recognized each other as such with the fullest cordiality. When they met the first inquiry was the name of each other's gens, and next the immediate pedigree of their respective sachems; after which they were usually able to find, under their peculiar system of consanguinity, the relationship in which they stood to each other. Three of the gentes, namely, the Wolf, Bear and Turtle, were common to the first tribes; these and three others were common to three tribes. In effect the Wolf gens, through the division of an original tribe into five, was now in five divisions, one of which was in each tribe. It was the same with the Bear and the Turtle gentes. The Deer, Snipe and Hawk gentes were common to the Senecas, Cayugas and Onondagas. Between the separated parts of each gens, although its members spoke different dialects of the same language, there existed a fraternal connection which linked the nations together with indissoluble bonds. When the Mohawk of the Wolf gens recognized an Oneida, Onondaga, Cayuga or Seneca of the same gens as a brother, and when the members of the other divided gentes did the same, the relation-

ship was not ideal, but a fact founded upon consanguinity, and upon faith in an assured lineage older than their dialects and coeval with their unity as one people. In the estimation of an Iroquois every member of his gens in whatever tribe was as certainly a kinsman as an own brother. This cross-relationship between persons of the same gens in the different tribes is still preserved and recognized among them in all its original force. It explains the tenacity with which the fragments of the old confederacy still cling together. If either of the five tribes had seceded from the confederacy it would have severed the bond of kin, although this would have been felt but slightly. But had they fallen into collision it would have turned the gens of the Wolf against their gentile kindred, Bear against Bear, in a word brother against brother. The history of the Iroquois demonstrates the reality as well as persistency of the bond of kin, and the fidelity with which it was respected. During the long period through which the confederacy endured, they never fell into anarchy, nor ruptured the organization. The "Long House" (*Ho-de'-no-sote*) was made the symbol of the confederacy; and they styled themselves the "People of the Long House" (*Ho-de'-no-sau-nee*).

. . . .

The valley of Onondaga, as the seat of the central tribe, and the place where the Council Brand was supposed to be perpetually burning, was the usual though not the exclusive place for holding the councils of the confederacy. In ancient times it was summoned to convene in the autumn of each year; but public exigencies often rendered its meeting more frequent. Each tribe had power to summon the council, and to appoint the time and place of meeting at the council-house of either tribe, when circumstances rendered a change from the usual place at Onondaga desirable. But the council had no power to convene itself.

Originally the principal object of the council was to raise up sachems to fill vacancies in the ranks of the ruling body occasioned by death or deposition; but it transacted all other business which concerned the common welfare. In course of time, as they multiplied in numbers and their intercourse with foreign tribes became more extended, the council fell into three distinct kinds, which may be distinguished as Civil, Mourning and Religious.

The first declared war and made peace, sent and received embassies, entered into treaties with foreign tribes, regulated the affairs of subjugated tribes, and took all needful measures to promote the general welfare. The second raised up sachems and invested them with office. It received the name of Mourning Council because the first of its ceremonies was the lament for the deceased ruler whose vacant place was to be filled. The third was held for the observance of a general religious festival. It was made an occasion for the confederated tribes to unite under the auspices of a general council in the observance of general religious rites. But as the Mourning Council was attended with many of the same ceremonies it came, in time, to answer for both. It is now the only council they hold, as the civil powers of the confederacy terminated with the supremacy over them of the state.

Invoking the patience of the reader, it is necessary to enter into some details with respect to the mode of transacting business at the Civil and Mourning Councils. In no other way can the archaic condition of society under gentile institutions be so readily illustrated.

If an overture was made to the confederacy by a foreign tribe, it might be done through either of the five tribes. It was the prerogative of the council of the tribe addressed to determine whether the affair was of sufficient importance to require a council of the confederacy. After reaching an affirmative conclusion, a herald was sent to the nearest tribes in position, on the east and on the west, with a belt of wampum, which contained a message to the effect that a civil council (*Ho-de-os'-seh*) would meet at such a place and time, and for such an object, each of which was specified. It was the duty of the tribe receiving the message to forward it to the tribe next in position, until the notification was made complete.[1] No council ever assembled unless it was summoned under the prescribed forms.

[1] A civil council, which might be called by either nation, was usually summoned and opened in the following manner: If, for example, the Onondagas made the call, they would send heralds to the Oneidas on the east, and the Cayugas on the west of them, with belts containing an invitation to meet at the Onondaga council-grove on such a day of such a moon, for purposes which were also named. It would then become the duty of the

When the sachems met in council, at the time and place appointed, and the usual reception ceremony had been performed, they arranged themselves in two divisions and seated themselves upon opposite sides of the council-fire. Upon one side were the Mohawk, Onondaga, and Seneca sachems. The tribes they represented were, when in council, brother tribes to each other and father tribes to the other two. In like manner their sachems were brothers to each other and fathers to those opposite. They constituted a phratry of tribes and of sachems, by an extension of the principle which united gentes in a phratry. On the opposite side of the fire were the Oneida and Cayuga, and, at a latter day, the Tuscarora sachems. The tribes they represented were brother tribes to each other, and son tribes to the opposite three. Their sachems also were brothers to each other,

Cayugas to send the same notification to the Senecas, and of the Oneidas to notify the Mohawks. If the council was to meet for peaceful purposes, then each sachem was to bring with him a bundle of fagots of white cedar, typical of peace; if for warlike objects then the fagots were to be of red cedar, emblematical of war.

At the day appointed the sachems of the several nations, with their followers, who usually arrived a day or two before and remained encamped at a distance, were received in a formal manner by the Onondaga sachems at the rising of the sun. They marched in separate processions from their camps to the council-grove, each bearing his skin robe and bundle of fagots, where the Onondaga sachems awaited them with a concourse of people. The sachems then formed themselves into a circle, an Onondaga sachem, who by appointment acted as master of the ceremonies, occupying the side toward the rising sun. At a signal they marched round the circle moving by the north. It may be here observed that the rim of the circle toward the north is called the "cold side," (o-to'-wa-ga); that on the west "the side toward the setting sun," (he-gă-kwas'-gwä); that on the south "the side of the high sun," (en-de-ih'-kwä); and that on the east "the side of the rising sun," (t'-kă-grit-kas'-gwä). After marching three times around on the circle single file, the head and foot of the column being joined, the leader stopped on the rising sun side, and deposited before him his bundle of fagots. In this he was followed by the others, one at a time, followed by the north, thus forming an inner circle of fagots. After this each sachem spread his skin robe in the same order, and sat down upon it, cross-legged, behind his bundle of fagots, with his assistant sachem standing behind him. The master of the ceremonies, after a moment's pause, arose, drew from his pouch two pieces of dry wood and a piece of punk with which he proceeded to strike fire by friction. When fire was thus obtained, he stepped within

and sons of those in the opposite division. They formed a second tribal phratry. As the Oneidas were a subdivision of the Mohawks, and the Cayugas a subdivision of the Onondagas or Senecas, they were in reality junior tribes; whence their relation of seniors and juniors, and the application of the phratric principle. When the tribes are named in council the Mohawks by precedence are mentioned first. Their tribal epithet was "The Shield" (*Da-gä-e-o'-dä*). The Onondagas came next under the epithet of "Name-Bearer" (*Ho-de-san-no'-ge-tä*), because they had been appointed to select and name the fifty original sachems.[2] Next in order of precedence were the Senecas, under the epithet of "Door-Keeper" (*Ho-nan-ne-ho'-ont*). They were made perpetual keepers of the western door of the Long House. The

the circle and set fire to his own bundle, and then to each of the others in the order in which they were laid. When they were well ignited, and at a signal from the master of the ceremonies, the sachems arose and marched three times around the Burning Circle, going as before by the north. Each turned from time to time as he walked, so as to expose all sides of his person to the warming influence of the fires. This typified that they warmed their affections for each other in order that they might transact the business of the council in friendship and unity. They then reseated themselves each upon his own robe. After this the master of the ceremonies again rising to his feet, filled and lighted the pipe of peace from his own fire. Drawing three whiffs, one after the other, he blew the first toward the zenith, the second toward the ground, and the third toward the sun. By the first act he returned thanks to the Great Spirit for the preservation of his life during the past year, and for being permitted to be present at this council. By the second, he returned thanks to his Mother, the Earth, for her various productions which had ministered to his sustenance. And by the third, he returned thanks to the Sun for his never-failing light, ever shining upon all. These words were not repeated, but such is the purport of the acts themselves. He then passed the pipe to the first upon his right toward the north, who repeated the same ceremonies, and then passed it to the next, and so on around the burning circle. The ceremony of smoking the calumet also signified that they pledged to each other their faith, their friendship, and their honor.

These ceremonies completed the opening of the council, which was then declared to be ready for the business upon which it had been convened.

[2] Tradition declares that the Onondagas deputed a wise-man to visit the territories of the tribes and select and name the new sachems as circumstances should prompt: which explains the unequal distribution of the office among the several gentes.

Oneidas, under the epithet of "Great Tree" (*Ne-ar'-de-on-dar'-go-war*), and the Cayugas, under that of "Great Pipe" (*So-nus'-ho-gwar-to-war*), were named fourth and fifth. The Tuscaroras, who came late into the confederacy, were named last, and had no distinguishing epithet. Forms, such as these, were more important in ancient society than we would be apt to suppose.

It was customary for the foreign tribe to be represented at the council by a delegation of wise-men and chiefs, who bore their proposition and presented it in person. After the council was formally opened and the delegation introduced, one of the sachems made a short address, in the course of which he thanked the Great Spirit for sparing their lives and permitting them to meet together; after which he informed the delegation that the council was prepared to hear from them upon the affair for which it had convened. One of the delegates then submitted their proposition in form, and sustained it by such arguments as he was able to make. Careful attention was given by the members of the council that they might clearly comprehend the matter in hand. After the address was concluded, the delegation withdrew from the council to await at a distance the result of its deliberations. It then became the duty of the sachems to agree upon an answer, which was reached through the ordinary routine of debate and consultation. When a decision had been made, a speaker was appointed to communicate the answer of the council, to receive which the delegation were recalled. The speaker was usually chosen from the tribe at whose instance the council had been convened. It was customary for him to review the whole subject in a formal speech, in the course of which the acceptance, in whole or in part, or the rejection of the proposition were announced with the reasons therefor. Where an agreement was entered upon, belts of wampum were exchanged as evidence of its terms. With these proceedings the council terminated.

"This belt preserves my words" was a common remark of an Iroquois chief in council. He then delivered the belt as the evidence of what he had said. Several such belts would be given in the course of a negotiation to the opposite party. In

the reply of the latter a belt would be returned for each proposition accepted. The Iroquois experienced the necessity for an exact record of some kind of a proposition involving their faith and honor in its execution, and they devised this method to place it beyond dispute.

Unanimity among the sachems was required upon all public questions, and essential to the validity of every public act. It was a fundamental law of the confederacy.[3] They adopted a method for ascertaining the opinions of the members of the council which dispensed with the necessity of casting votes. Moreover, they were entirely unacquainted with the principle of majorities and minorities in the action of councils. They voted in council by tribes, and the sachems of each tribe were required to be of one mind to form a decision. Recognizing unanimity as a necessary principle, the founders of the confederacy divided the sachems of each tribe into classes as a means for its attainment. [Morgan illustrates this division by a table, page 130.] No sachem was allowed to express an opinion in council in the nature of a vote until he had first agreed with the sachem or sachems of his class upon the opinion to be expressed, and had been appointed to act as speaker for the class. Thus the eight Seneca sachems being in four classes could have but four opinions, and the ten Cayuga sachems, being in the same number of classes, could have but four. In this manner the sachems in each class were first brought to unanimity among themselves. A cross-consultation was then held between the four sachems appointed to speak for the four classes; and when they had agreed, they designated one of their number to express their resulting opinion, which was the answer of their tribe. When the sachems of the several tribes had, by this ingenious method, be-

[3] At the beginning of the American revolution the Iroquois were unable to agree upon a declaration of war against our confederacy for want of unanimity in council. A number of the Oneida sachems resisted the proposition and finally refused their consent. As neutrality was impossible with the Mohawks and the Senecas were determined to fight, it was resolved that each tribe might engage in the war upon its own responsibility, or remain neutral. The war against the Eries, against the Neutral Nation and Susquehannocks, and the several wars against the French, were resolved upon in general council. Our colonial records are largely filled with negotiations with the Iroquois confederacy.

come of one mind separately, it remained to compare their several opinions, and if they agreed the decision of the council was made. If they failed of agreement the measure was defeated, and the council was at an end. The five persons appointed to express the decision of the five tribes may possibly explain the appointment and the functions of the six electors, so called, in the Aztec confederacy, which will be noticed elsewhere.

By this method of gaining assent the equality and independence of the several tribes were recognized and preserved. If any sachem was obdurate or unreasonable, influences were brought to bear upon him, through the preponderating sentiment, which he could not well resist; so that it seldom happened that inconvenience or detriment resulted from their adherence to the rule. Whenever all efforts to procure unanimity had failed, the whole matter was laid aside because further action had become impossible.

The induction of new sachems into office was an event of great interest to the people, and not less to the sachems who retained thereby some control over the introduction of new members into their body. To perform the ceremony of raising up sachems the general council was primarily instituted. It was named at the time, or came afterwards to be called, the Mourning Council (*Hen-nun-du-nuh'-seh,*) because it embraced the twofold object of lamenting the death of the departed sachem and of installing his successor. Upon the death of a sachem, the tribe in which the loss had occurred had power to summon a general council, and to name the time and place of its meeting. A herald was sent out with a belt of wampum, usually the official belt of the deceased sachem given to him at his installation, which conveyed this laconic message;—"the name" (mentioning that of the late ruler) "calls for a council." It also announced the day and place of convocation. In some cases the official belt of the sachem was sent to the central council-fire at Onondaga immediately after his burial, as a notification of his demise, and the time for holding the council was determined afterwards.

The Mourning Council, with the festivities which followed the investiture of sachems possessed remarkable attractions for the Iroquois. They flocked to its attendance from the most dis-

tant localities with zeal and enthusiasm. It was opened and conducted with many forms and ceremonies, and usually lasted five days. The first was devoted to the prescribed ceremony of lamentations for the deceased sachem, which, as a religious act, commenced at the rising of the sun. At this time the sachems of the tribe, with whom the council was held, marched out followed by their tribesmen, to receive formally the sachems and people of the other tribes, who had arrived before and remained encamped at some distance waiting for the appointed day. After exchanging greetings, a procession was formed and the lament was chanted in verse, with responses, by the united tribes, as they marched from the place of reception to the place of council. The lament, with the responses in chorus, was a tribute of respect to the memory of the departed sachem, in which not only his gens, but his tribe, and the confederacy itself participated. It was certainly a more delicate testimonial of respect and affection than would have been expected from a barbarous people. This ceremonial, with the opening of the council, concluded the first day's proceedings. On the second day, the installation ceremony commenced, and it usually lasted into the fourth. The sachems of the several tribes seated themselves in two divisions, as at the civil council. When the sachem to be raised up belonged to either of the three senior tribes the ceremony was performed by the sachems of the junior tribes, and the new sachem was installed as a father. In like manner, if he belonged to either of the three junior tribes the ceremony was performed by the sachems of the senior tribes, and the new sachem was installed as a son. These special circumstances are mentioned to show the peculiar character of their social and governmental life. To the Iroquois these forms and figures of speech were full of significance.

Among other things, the ancient wampum belts, into which the structure and principles of the confederacy "had been talked," to use their expression, were produced and read or interpreted for the instruction of the newly inducted sachem. A wise-man, not necessarily one of the sachems, took these belts one after the other and walking to and fro between the two divisions of sachems, read from them the facts which they recorded. Ac-

cording to the Indian conception, these belts can tell by means of an interpreter, the exact rule, provision of transaction talked into them at the time, and of which they were the exclusive record. A strand of wampum consisting of strings of purple and white shell beads, or a belt woven with figures formed by beads of different colors, operated on the principle of associating a particular fact with a particular string or figure; thus giving a serial arrangement to the facts as well as fidelity to the memory. These strands and belts of wampum were the only visible records of the Iroquois; but they required those trained interpreters who could draw from their strings and figures the records locked up in their remembrance. One of the Onondaga sachems (*Ho-no-we-nă'-to*) was made "Keeper of the Wampum," and two aids were raised up with him who were required to be versed in its interpretation as well as the sachem. The interpretation of these several belts and strings brought out, in the address of the wise-man, a connected account of the occurrences at the formation of the confederacy. The tradition was repeated in full, and fortified in its essential parts by reference to the record contained in these belts. Thus the council to raise up sachems became a teaching council, which maintained in perpetual freshness in the minds of the Iroquois the structure and principles of the confederacy, as well as the history of its formation. These proceedings occupied the council until noon each day; the afternoon being devoted to games and amusements. At twilight each day a dinner in common was served to the entire body in attendance. It consisted of soup and boiled meat cooked near the council-house, and served directly from the kettle in wooden bowls, trays, and ladles. Grace was said before the feast commenced. It was a prolonged exclamation by a single person on a high shrill note, falling down in cadences into stillness, followed by a response in chorus by the people. The evenings were devoted to the dance. With these ceremonies, continued for several days, and with the festivities that followed, their sachems were inducted into office.

By investing their sachems with office through a general council, the framers of the confederacy had in view the threefold object of a perpetual succession in the gens, the benefits

of a free election among its members, and a final supervision of the choice through the ceremony of investiture. To render the latter effective it should carry with it the power to reject the nominee. Whether the right to invest was purely functional, or carried with it the right to exclude, I am unable to state. No case of rejection is mentioned. The scheme adopted by the Iroquois to maintain a ruling body of sachems may claim, in several respects, the merit of originality, as well as of adaptation to their condition. In form an oligarchy, taking this term in its best sense, it was yet a representative democracy of the archaic type. A powerful popular element pervaded the whole organism and influenced its action. It is seen in the right of the gentes to elect and depose their sachems and chiefs, in the right of the people to be heard in council through orators of their own selection, and in the voluntary system in the military service. In this and the next succeeding ethnical period democratic principles were the vital element of gentile society.

The Iroquois name for a sachem (*Ho-yar-na-go'-war*), which signifies "a counselor of the people," was singularly appropriate to a ruler in a species of free democracy. It not only defines the office well, but it also suggests the analogous designation of the members of the Grecian council of chiefs. The Grecian chiefs were styled "councilors of the people." From the nature and tenure of the office among the Iroquois the sachems were not masters ruling by independent right, but representatives holding from the gentes by free election. It is worthy of notice that an office which originated in savagery, and continued through the three sub-periods of barbarism, should reveal so much of its archaic character among the Greeks after the gentile organization had carried this portion of the human family to the confines of civilization. It shows further how deeply inwrought in the human mind the principle of democracy had become under gentilism.

The designation for a chief of the second grade, *Ha-sa-no-wä'-na*, "an elevated name," indicates an appreciation by barbarians of the ordinary motives for personal ambition. It also reveals the sameness of the nature of man, whether high up or low down upon the rounds of the ladder of progress. The

celebrated orators, wise-men and war-chiefs of the Iroquois were chiefs of the second grade almost without exception. One reason for this may be found in the organic provision which confined the duties of the sachem to the affairs of peace. Another may have been to exclude from the ruling body their ablest men, lest their ambitious aims should disturb its action. As the office of chief was bestowed in reward of merit, it fell necessarily upon their ablest men. Red-Jacket, Brandt, Garangula, Cornplanter, Farmer's Brother, Frost, Johnson, and other well known Iroquois, were chiefs as distinguished from sachems. None of the long lines of sachems have become distinguished in American annals, with the exception of Logan, Handsome Lake, and at a recent day, Ely S. Parker. The remainder have left no remembrance behind them extending beyond the Iroquois.

At the time the confederacy was formed *To-do-dä'-ho* was the most prominent and influential of the Onondaga chiefs. His accession to the plan of a confederacy, in which he would experience a diminution of power, was regarded as highly meritorious. He was raised up as one of the Onondaga sachems and his name placed first in the list. Two assistant sachems were raised up with him to act as his aids and to stand behind him on public occasions. Thus dignified, this sachemship has since been regarded by the Iroquois as the most illustrious of the forty-eight, from the services rendered by the first *To-do-dä'-ho*. The circumstance was early seized upon by the inquisitive colonists to advance the person who held this office to the position of king of the Iroquois; but the misconception was refuted, and the institutions of the Iroquois were relieved of the burden of an impossible feature. In the general council he sat among his equals. The confederacy had no chief executive magistrate.

Under a confederacy of tribes the office of general (*Hosgä-a-geh'-da-go-wä*), "Great War Soldier," makes its first appearance. Cases would now arise when the several tribes in their confederate capacity would be engaged in war; and the necessity for a general commander to direct the movements of the united bands would be felt. The introduction of this office as a permanent feature in the government was a great event in the history of human progress. It was the beginning of a dif-

ferentiation of the military from the civil power, which, when completed, changed essentially the external manifestation of the government. But even in later stages of progress, when the military spirit predominated, the essential character of the government was not changed. Gentilism arrested usurpation. With the rise of the office of general, the government was gradually changed from a government of one power, into a government of two powers. The functions of government became, in course of time, co-ordinated between the two. This new office was the germ of that of a chief executive magistrate; for out of the general came the king, the emperor, and the president, as elsewhere suggested. The office sprang from the military necessities of society, and had a logical development. For this reason its first appearance and subsequent growth have an important place in this discussion. In the course of this volume I shall attempt to trace the progressive development of this office, from the *Great War Soldier* of the Iroquois through the *Teutcli* of the Aztecs, to the *Basileus* of the Grecian and the *Rex* of the Roman tribes; among all of whom, through three successive ethnical periods, the office was the same, namely, that of a general in a military democracy. Among the Iroquois, the Aztecs, and the Romans the office was elective, or confirmative, by a constituency. Presumptively, it was the same among the Greeks of the traditionary period. It is claimed that the office of *basileus* among the Grecian tribes in the Homeric period was hereditary from father to son. This is at least doubtful. It is such a wide and total departure from the original tenure of the office as to require positive evidence to establish the fact. An election, or confirmation by a constituency, would still be necessary under gentile institutions. If in numerous instances it were known that the office had passed from father to son this might have suggested the inference of hereditary succession, now adopted as historically true, while succession in this form did not exist. Unfortunately, an intimate knowledge of the organization and usages of society in the traditionary period is altogether wanting. Great principles of human action furnish the safest guide when their operation must have been necessary. It is far more probable that hereditary succession, when it first came in, was

established by force, than by the free consent of the people; and that it did not exist among the Grecian tribes in the Homeric period.

When the Iroquois confederacy was formed, or soon after that event, two permanent war-chiefships were created and named, and both were assigned to the Seneca tribe. One of them (*Ta-wan'-ne-ars,* signifying needle-breaker) was made hereditary in the Wolf, and the other (*So-no'-so-wä,* signifying great oyster shell) in the Turtle gens. The reason assigned for giving them both to the Senecas was the greater danger of attack at the west end of their territories. They were elected in the same manner as the sachems, were raised up by a general council, and were equal in rank and power. Another account states that they were created later. They discovered immediately after the confederacy was formed that the structure of the Long House was incomplete because there were no officers to execute the military commands of the confederacy. A council was convened to remedy the omission, which established the two perpetual war-chiefs named. As general commanders they had charge of the military affairs of the confederacy, and the command of its joint forces when united in a general expedition. Governor Blacksnake, recently deceased, held the office first named, thus showing that the succession has been regularly maintained. The creation of two principal war-chiefs instead of one, and with equal powers, argues a subtle and calculating policy to prevent the domination of a single man even in their military affairs. They did without experience precisely as the Romans did in creating two consuls instead of one, after they had abolished the office of *rex.* Two consuls would balance the military power between them, and prevent either from becoming supreme. Among the Iroquois this office never became influential. . . . .—Lewis H. Morgan, *Ancient Society,* 124–48. (Copyright by Henry Holt & Co., 1877.)

WYANDOT GOVERNMENT

In the social organization of the Wyandots four groups are recognized—the family, the gens, the phratry, and the tribe.

The family, as the term is here used, is nearly synonymous with the household. It is composed of the persons who occupy

one lodge, or, in their permanent wigwams, one section of a communal dwelling. These permanent dwellings are constructed in an oblong form, of poles interwoven with bark. The fire is placed in line along the center, and is usually built for two families, one occupying the place on each side of the fire. The head of the family is a woman.

The gens is an organized body of consanguineal kindred in the female line. "The woman carries the gens," is the formulated statement by which a Wyandot expresses the idea that descent is in the female line. Each gens has the name of some animal, the ancient of such animal being its tutelar god. Up to the time that the tribe left Ohio, eleven gentes were recognized, as follows:

Deer, Bear, Highland Turtle (striped), Highland Turtle (black), Mud Turtle, Smooth Large Turtle, Hawk, Beaver, Wolf, Sea Snake, and Porcupine.

In speaking of an individual he is said to be a wolf, a bear, or a deer as the case may be, meaning thereby that he belongs to that gens; but in speaking of the body of people comprising a gens, they are said to be relatives of the wolf, the bear, or the deer, as the case may be.

There is a body of names belonging to each gens, so that each person's name indicates the gens to which he belongs. These names are derived from the characteristics, habits, attitudes, or mythologic stories connected with the tutelar god.

There are four phratries in the tribe, the three gentes Bear, Deer, and Striped Turtle constituting the first; the Highland Turtle, Black Turtle, and Smooth Large Turtle the second; the Hawk, Beaver, and Wolf the third, and the Sea Snake and Porcupine the fourth.

This unit in their organization has a mythologic basis, and is chiefly used for religious purposes, in the preparation of medicines, and in festivals and games.

The eleven gentes, as four phratries, constitute the tribe.

Each gens is a body of consanguineal kindred in the female line, and each gens is allied to other gentes by consanguineal kinship through the male line, and by affinity through marriage.

To be a member of a tribe it is necessary to be a member of a gens; to be a member of a gens it is necessary to belong to some

family; and to belong to a family a person must have been born in the family so that his kinship is recognized, or he must be adopted into a family and become a son, brother, or some definite relative; and this artificial relationship gives him the same standing as actual relationship in the family, in the gens, in the phratry, and in the tribe.

Thus a tribe is a body of kindred.

Of the four groups thus described, the gens, the phratry, and the tribe constitute the series of organic units; the family, or household as here described, is not a unit of the gens or phratry, as two gentes are represented in each—the father must belong to one gens, and the mother and her children to another.

Society is maintained by the establishment of government; for rights must be recognized and duties performed.

In this tribe there is found a complete differentiation of the military from the civil government.

The civil government inheres in a system of councils and chiefs.

In each gens there is a council, composed of four women, called *Yu-wai-yu-wa'-na.* These four women councillors select a chief of the gens from its male members—that is, from their brothers and sons. This gentile chief is the head of the gentile council.

The council of the tribe is composed of the aggregated gentile councils. The tribal council, therefore, is composed one-fifth of men and four-fifths of women.

The sachem of the tribe, or tribal chief, is chosen by the chiefs of the gentes.

There is sometimes a grand council of the gens, composed of the councilors of the gens proper and all the heads of households and leading men—brothers and sons.

There is also sometimes a grand council of the tribe, composed of the council of the tribe proper and the heads of households of the tribe, and all the leading men of the tribe.

These grand councils are convened for special purposes.

The four women councillors of the gens are chosen by the heads of households, themselves being women. There is no formal election, but frequent discussion is had over the matter

from time to time, in which a sentiment grows up with the gens and throughout the tribe that, in the event of the death of any councillor, a certain person will take her place.

In this manner there is usually one, two, or more potential councillors in each gens who are expected to attend all the meetings of the council, though they take no part in the deliberations and have no vote.

When a woman is installed as councillor a feast is prepared by the gens to which she belongs, and to this feast all the members of the tribe are invited. The woman is painted and dressed in her best attire and the sachem of the tribe places upon her head the gentile chaplet of feathers, and announces in a formal manner to the assembled guests that the woman has been chosen a councillor. The ceremony is followed by feasting and dancing, often continued late into the night.

The gentile chief is chosen by the council women after consultation with the other women and men of the gens. Often the gentile chief is a potential chief through a period of probation. During this time he attends the meetings of the council, but takes no part in the deliberations, and has no vote.

At his installation, the council women invest him with an elaborately ornamented tunic, place upon his head a chaplet of feathers, and paint the gentile totem on his face. The sachem of the tribe then announces to the people that the man has been made chief of the gens, and admitted to the council. This is also followed by a festival.

The sachem of the tribe is selected by the men belonging to the council of the tribe. Formerly the sachemship inhered in the Bear gens, but at present he is chosen from the Deer gens, from the fact, as the Wyandots say, that death has carried away all the wise men of the Bear gens.

The chief of the Wolf gens is the herald and the sheriff of the tribe. He superintends the erection of the council-house and has the care of it. He calls the council together in a formal manner when directed by the sachem. He announces to the tribe all the decisions of the council, and executes the directions of the council and of the sachem.

Gentile councils are held frequently from day to day and

from week to week, and are called by the chief whenever deemed necessary. When matters before the council are considered of great importance, a grand council of the gens may be called.

The tribal council is held regularly on the night of the full moon of each lunation and at such other times as the sachem may determine; but extra councils are usually called by the sachem at the request of a number of councillors.

Meetings of the gentile councils are very informal, but the meetings of the tribal councils are conducted with due ceremony. When all the persons are assembled, the chief of the Wolf gens calls them to order, fills and lights a pipe, sends one puff of smoke to the heavens, and another to the earth. The pipe is then handed to the sachem, who fills his mouth with smoke, and, turning from left to right with the sun, slowly puffs it out over the heads of the councillors, who are sitting in a circle. He then hands the pipe to the man on his left, and it is smoked in turn by each person until it has been passed around the circle. The sachem then explains the object for which the council is called. Each person in the way and manner he chooses tells what he thinks should be done in the case. If a majority of the council is agreed as to action, the sachem does not speak, but may simply announce the decision. But in some cases there may be protracted debate, which is carried on with great deliberation. In case of a tie, the sachem is expected to speak. It is considered dishonorable for any man to reverse his decision after having spoken.

Such are the organic elements of the Wyandot government.

It is the function of government to preserve rights and enforce the performance of duties. Rights and duties are correlative. Rights imply duties, and duties imply rights. The right inhering in the party of the first part imposes a duty on the party of the second part. The right and its co-relative duty are inseparable parts of a relation that must be maintained by government; and the relations which governments are established to maintain may be treated under the general head of rights. In Wyandot government these rights may be classed as follows: 1, rights of marriage; 2, rights to names; 3, rights to personal adornments; 4, rights of order in encampments and

migrations; 5, rights of property; 6, rights of person; 7, rights of community; 8, rights of religion.

To maintain rights, rules of conduct are established, not by formal enactment, but by regulated usage. Such custom-made laws may be called regulations.

Marriage between members of the same gens is forbidden, but consanguineal marriages between persons of different gentes are permitted. For example, a man may not marry his mother's sister's daughter, as she belongs to the same gens with himself; but he can marry his father's sister's daughter, because she be-belongs to a different gens.

Husbands retain all their rights and privileges in their own gentes, though they live with the gentes of their wives. Children, irrespective of sex, belong to the gens of the mother. Men and women must marry within the tribe. A woman taken to wife from without the tribe must first be adopted into some family of a gens other than that to which the man belongs. That a woman may take for a husband a man without the tribe he must also be adopted into the family of some gens other than that of the woman. What has been called by some ethnologists endogamy and exogamy are correlative parts of one regulation, and the Wyandots, like all other tribes of which we have any knowledge in North America, are both endogamous and exogamous.

Polygamy is permitted, but the wives must belong to different gentes. The first wife remains the head of the household. Polyandry is prohibited.

A man seeking a wife consults her mother, sometimes direct, and sometimes through his own mother. The mother of the girl advises with the women councillors to obtain their consent, and the young people usually submit quietly to their decision. Sometimes the women councillors consult with the men.

When a girl is betrothed, the man makes such presents to the mother as he can. It is customary to consummate the marriage before the end of the moon in which the betrothal is made. Bridegroom and bride make promises of faithfulness to the parents and women councillors of both parties. It is customary to give a marriage feast, in which the gentes of both parties take

part. For a short time at least, bride and groom live with the bride's mother, or rather in the original household of the bride. The time when they will set up housekeeping for themselves is usually arranged before marriage.

In the event of the death of the mother, the children belong to her sister or to her nearest female kin, the matter being settled by the council women of the gens. As the children belong to the mother, on the death of the father the mother and children are cared for by her nearest male relative until subsequent marriage.

It has been previously explained that there is a body of names, the exclusive property of each gens. Once a year, at the green-corn festival, the council women of the gens select the names for the children born during the previous year, and the chief of the gens proclaims these names at the festival. No person may change his name, but every person, man or woman, by honorable or dishonorable conduct, or by remarkable circumstance, may win a second name commemorative of deed or circumstance, which is a kind of title.

Each clan has a distinctive method of painting the face, a distinctive chaplet to be worn by the gentile chief and council women when they are inaugurated, and subsequently at festival occasions, and distinctive ornaments for all its members, to be used at festivals and religious ceremonies.

The camp of the tribe is in an open circle or horse-shoe, and the gentes camp in the following order, beginning on the left and going around to the right:

Deer, Bear, Highland Turtle (striped), Highland Turtle (black), Mud Turtle, Smooth Large Turtle, Hawk, Beaver, Wolf, Sea Snake, Porcupine.

The order in which the households camp in the gentile group is regulated by the gentile councillors and adjusted from time to time in such a manner that the oldest family is placed on the left, and the youngest on the right. In migrations and expeditions the order of travel follows the analogy of encampment.

Within the area claimed by the tribe each gens occupies a smaller tract for the purpose of cultivation. The right of the gens to cultivate a particular tract is a matter settled in the coun-

cil of the tribe, and the gens may abandon one tract for another only with the consent of the tribe. The women councillors partition the gentile land among the householders, and the household tracts are distinctly marked by them. The ground is repartitioned once in two years. The heads of households are responsible for the cultivation of the tract, and should this duty be neglected the council of the gens calls the responsible parties to account.

Cultivation is communal; that is, all of the able-bodied women of the gens take part in the cultivation of each household tract in the following manner:

The head of the household sends her brother or son into the forest or to the stream to bring in game or fish for a feast; then the able-bodied women of the gens are invited to assist in the cultivation of the land, and when this work is done a feast is given.

The wigwam or lodge and all articles of the household belong to the woman—the head of the household—and at her death are inherited by her eldest daughter, or nearest of female kin. The matter is settled by the council women. If the husband die his property is inherited by his brother or his sister's son, except such portion as may be buried with him. His property consists of his clothing, hunting and fishing implements, and such articles as are used personally by himself.

Usually a small canoe is the individual property of the man. Large canoes are made by the male members of the gentes, and are the property of the gentes.

Each individual has a right to freedom of person and security from personal and bodily injury, unless adjudged guilty of crime by proper authority.

Each gens has the right to the services of all its women in the cultivation of the soil. Each gens has the right to the service of all its male members in avenging wrongs, and the tribe has the right to the service of all its male members in time of war.

Each phratry has the right to certain religious ceremonies and the preparation of certain medicines.

Each gens has the exclusive right to worship its tutelar god,

and each individual has the exclusive right to the possession and use of a particular amulet.

The violations of right are crimes. Some of the crimes recognized by the Wyandots are as follows: 1, adultery; 2, theft; 3, maiming; 4, murder; 5, treason; 6, witchcraft.

A maiden guilty of fornication may be punished by her mother or female guardian, but if the crime is flagrant and repeated, so as to become a matter of general gossip, and the mother fails to correct it, the matter can be taken up by the council women of the gens.

A woman guilty of adultery, for the first offense is punished by having her hair cropped; for repeated offenses her left ear is cut off.

The punishment for theft is twofold restitution. When the prosecutor and prosecuted belong to the same gens, the trial is before the council of the gens, and from it there is no appeal. If the parties involved are of different gentes, the prosecutor, through the head of his household, lays the matter before the council of his own gens; by it the matter is laid before the gentile council of the accused in a formal manner. Thereupon it becomes the duty of the council of the accused to investigate the facts for themselves, and to settle the matter with the council of the plaintiff. Failure thus to do is followed by retaliation in the seizure of any property of the gens which may be found.

Maiming is compounded, and the method of procedure in prosecution is essentially the same as for theft.

In the case of murder, if both parties are members of the same gens, the matter is tried by the gentile council on complaint of the head of the household, but there may be an appeal to the council of the tribe. Where the parties belong to different gentes, complaint is formally made by the injured party, through the chief of his gens, in the following manner:

A wooden tablet is prepared, upon which is inscribed the totem or heraldic emblem of the injured man's gens, and a picture-writing setting forth the offense follows.

The gentile chief appears before the chief of the council of the offender, and formally states the offense, explaining the picture-writing, which is then delivered.

A council of the offender's gens is thereupon called and a trial is held. It is the duty of this council to examine the evidence for themselves and to come to a conclusion without further presentation of the matter on the part of the person aggrieved. Having decided the matter among themselves, they appear before the chief of the council of the aggrieved party to offer compensation.

If the gens of the offender fail to settle the matter with the gens of the aggrieved party, it is the duty of his nearest relative to avenge the wrong. Either party may appeal to the council of the tribe. The appeal must be made in due form, by the presentation of a tablet of accusation.

Inquiry into the effect of a failure to observe prescribed formalities developed an interesting fact. In procedure against crime, failure in formality is not considered a violation of the rights of the accused, but proof of his innocence. It is considered supernatural evidence that the charges are false. In trials for all offenses forms of procedure are, therefore, likely to be earnestly questioned.

Treason consists in revealing the secrets of the medicine preparations or giving other information or assistance to enemies of the tribe, and is punished by death. The trial is before the council of the tribe.

Witchcraft is punished by death, stabbing, tomahawking, or burning. Charges of witchcraft are investigated by the grand council of the tribe. When the accused is adjudged guilty, he may appeal to supernatural judgment. The test is by fire. A circular fire is built on the ground, through which the accused must run from east to west and from north to south. If no injury is received he is adjudged innocent; if he falls into the fire he is adjudged guilty. Should a person accused or having the general reputation of practicing witchcraft become deaf, blind, or have sore eyes, earache, headache, or other diseases considered loathsome, he is supposed to have failed in practicing his arts upon others, and to have fallen a victim to them himself. Such cases are most likely to be punished.

The institution of outlawry exists among the Wyandots in a peculiar form. An outlaw is one who by his crimes has placed

himself without the protection of his clan. A man can be declared an outlaw by his own clan, who thus publish to the tribe that they will not defend him in case he is injured by another. But usually outlawry is declared only after trial before the tribal council.

The method of procedure is analogous to that in case of murder. When the person has been adjudged guilty and sentence of outlawry declared, it is the duty of the chief of the Wolf clan to make known the decision of the council. This he does by appearing before each clan in the order of its encampment, and declaring in terms the crime of the outlaw and the sentence of outlawry, which may be either of two grades.

In the lowest grade it is declared that if the man shall thereafter continue in the commission of similar crimes, it will be lawful for any person to kill him; and if killed, rightfully or wrongfully, his clan will not avenge his death.

Outlawry of the highest degree makes it the duty of any member of the tribe who may meet with the offender to kill him.

The management of military affairs inheres in the military council and chief. The military council is composed of all the able-bodied men of the tribe; the military chief is chosen by the council from the Porcupine gens. Each gentile chief is responsible for the military training of the youth under his authority. There is usually one or more potential military chiefs, who are the close companions and assistants of the chief in time of war, and in case of the death of the chief, take his place in the order of seniority.

Prisoners of war are adopted into the tribe or killed. To be adopted into the tribe, it is necessary that the prisoner should be adopted into some family. The warrior taking the prisoner has the first right to adopt him, and his male or female relatives have the right in the order of their kinship. If no one claims the prisoner for this purpose, he is caused to run the gauntlet as a test of his courage.

If at his trial he behaves manfully, claimants are not wanting, but if he behaves disgracefully he is put to death.

There is an interesting institution found among the Wyan-

dots, as among some other of our North American tribes, namely, that of fellowhood. Two young men agree to be perpetual friends to each other, or more than brothers. Each reveals to the other the secrets of his life, and counsels with him on matters of importance and defends him from wrong and violence, and at his death is chief mourner.

The government of the Wyandots, with the social organization upon which it is based, affords a typical example of tribal government throughout North America. Within that area there are several hundred distinct governments. In so great a number there is great variety, and in this variety we find different degrees of organization, the degrees of organization being determined by the differentiation of the functions of the government and the correlative specialization of organic elements.

Much has yet to be done in the study of these governments before safe generalizations may be made. But enough is known to warrant the following statement:

Tribal government in North America is based on kinship in that the fundamental units of social organization are bodies of consanguineal kindred either in the male or female line; these units being what has been well denominated "gentes."

These "gentes" are organized into tribes by ties of relationship and affinity, and this organization is of such a character that the man's position in the tribe is fixed by his kinship. There is no place in a tribe for any person whose kinship is not fixed, and only those persons can be adopted into the tribe who are adopted into some family with artificial kinship specified. The fabric of Indian society is a complex tissue of kinship. The warp is made of streams of kinship blood, and the woof of marriage ties.

With most tribes military and civil affairs are differentiated. The functions of civil government are in general differentiated only to this extent, that executive functions are performed by chiefs and sachems, but these chiefs and sachems are also members of the council. The council is legislature and court. Perhaps it were better to say that the council is the court whose decisions are law, and that the legislative body properly has not been developed.

In general, crimes are well defined. Procedure is formal, and forms are held as of such importance that error therein is *prima facie* evidence that the subject-matter formulated was false.

When one gens charges crime against a member of another, it can of its own motion proceed only to retaliation. To prevent retaliation, the gens of the offender must take the necessary steps to disprove the crime, or to compound or punish it. The charge once made is held as just and true until it has been disproved, and in trial the cause of the defendant is first stated. The anger of the prosecuting gens must be placated.

In the tribal governments there are many institutions, customs, and traditions which give evidence of a former condition in which society was based not upon kinship, but upon marriage.

From a survey of the facts it seems highly probable that kinship society, as it exists among the tribes of North America, has developed from connubial society, which is discovered elsewhere on the globe. In fact, there are a few tribes that seem scarcely to have passed that indefinite boundary between the two social states. Philologic research leads to the same conclusion.

Nowhere in North America have a people been discovered who have passed beyond tribal society to national society based on property, *i. e.*, that form of society which is characteristic of civilization. Some peoples may not have reached kinship society; none have passed it.

Nations with civilized institutions, art with palaces, monotheism as the worship of the Great Spirit, all vanish from the priscan condition of North America in the light of anthropologic research. Tribes with the social institutions of kinship, art with its highest architectural development exhibited in the structure of communal dwellings, and polytheism in the worship of mythic animals and nature-gods remain.—J. W. Powell, *Reports of the Bureau of Ethnology*, 1:59–69.

HOSPITALITY OF THE AMERICAN INDIANS

When America was discovered in its several parts the Indian tribes were found in dissimilar conditions. The least advanced tribes were without the art of pottery, and without horticulture,

and were, therefore, in savagery. But in the arts of life they were advanced as far as is implied by its Upper Status, which found them in possession of the bow and arrow. Such were the tribes in the Valley of the Columbia, in the Hudson Bay Territory, in parts of Canada, California, and Mexico, and some of the coast tribes of South America. The use of pottery and the cultivation of maize and plants, were unknown among them. They depended for subsistence upon fish, bread, roots, and game. The second class were intermediate between them and the Village Indians. They subsisted upon fish and game and the products of a limited horticulture, and were in the Lower Status of barbarism. Such were the Iroquois, the New England and Virginia Indians, the Creeks, Cherokees, and Choctaws, the Shawnees, Miamis, Mandans, Minnitarees, and other tribes of the United States east of the Missouri River, together with certain tribes of Mexico and South America in the same condition of advancement. Many of them lived in villages, some of which were stockaded, but village life was not as distinctive and common among them as it was among the most advanced tribes. The third class were the Village Indians proper, who depended almost exclusively upon horticulture for subsistence, cultivating maize and plants by irrigation. They constructed joint tenement houses of adobe bricks and stone, usually more than one story high. Such were the tribes of New Mexico, Mexico, Central America, and upon the plateau of the Andes. These tribes were in the Middle Status of barbarism.

The weapons, arts, usages, and customs, inventions, architecture, institutions, and form of government of all alike bear the impress of a common mind, and reveal, in their wide range, the successive stages of development of the same original conceptions. Our first mistake consisted in overrating the degree of advancement of the Village Indians, in comparison with that of the other tribes; our second in underrating that of the latter; from which resulted a third, that of separating one from the other, and regarding them as different races. The evidence of their unity of origin has now accumulated to such a degree as to leave no reasonable doubt upon the question. The first two classes of tribes always held the preponderating power, at least

in North America, and furnished the migrating bands which replenished the ranks of the Village Indians, as well as the continent, with inhabitants. It remained for the Village Indians to invent the process of smelting iron ore to attain to the Upper Status of barbarism, and, beyond that, to invent a phonetic alphabet to reach the first stage of civilization. One entire ethnical period intervened between the highest class of Indians and the beginning of civilization.

It seems singular that the Village Indians, who first became possessed of maize, the great American cereal, and of the art of cultivation, did not rise to supremacy over the continent. With their increased numbers and more stable subsistence they might have been expected to extend their power and spread their migrating bands over the most valuable areas to the gradual displacement of the ruder tribes. But in this respect they signally failed. The means of sustaining life among the latter were remarkably persistent. The higher culture of the Village Indians, such as it was, did not enable them to advance, either in their weapons or in the art of war, beyond the more barbarous tribes, except as a superior house architecture tended to render their villages and their habitations impregnable to Indian assault. Moreover, in the art of government, they had not been able to rise above gentile institutions and establish political society. This fact demonstrates the impossibility of privileged classes and of potentates, under their institutions, with power to enforce the labor of the people for the erection of palaces for their use, and explains the absence of such structures.

Horticulture and other domestic arts spread from the Village Indians to the tribes in the Lower Status of barbarism, and thus advanced them materially in their onward progress toward the higher conditions of the Village Indians. Numerous tribes were thus raised out of savagery into barbarism by appropriating the arts of life of tribes above them. This process has been a constant phenomenon in the history of the human race. It is well illustrated in America, where the Red Race, one in origin and possessed of homogeneous institutions, were in three different ethnical conditions or stages of culture.

There are certain usages and customs of the Indian tribes

generally which tend to explain their plan of life—their large households, their houses, and their house architecture. They deserve a careful consideration and even further investigation beyond the bounds of our present knowledge. The influence of American civilization has very generally broken up their old plan of life, and introduced a new one more analogous to our own. It has been much the same in Spanish America. The old usages and customs, in the particulars about to be stated, have now so far disappeared in their pure forms that their recovery is not free from difficulty. Those to be considered are the following:

I. *The law of hospitality.*
II. *Communism in living.*
III. *The ownership of lands in common.*
IV. *The practice of having but one prepared meal each day —a dinner.*
V. *Their separation at meals, the men eating first and by themselves and the women and children afterwards.*

The discussion will be confined to the period of European discovery and to later periods while these practices remained. The object will be to show that these usages and customs existed among them when America was discovered in its several parts, and that they remained in practice for some time after these several periods.

Among the Iroquois hospitality was an established usage. If a man entered an Indian house in any of their villages, whether a villager, a tribesman, or a stranger, it was the duty of the women therein to set food before him. An omission to do this would have been a discourtesy amounting to an affront. If hungry, he ate; if not hungry, courtesy required that he should taste the food and thank the giver. This would be repeated at every house he entered, and at whatever hour in the day. As a custom it was upheld by a rigorous public sentiment. The same hospitality was extended to strangers from their own and from other tribes. Upon the advent of the European race among them it was also extended to them. This characteristic of barbarous society, wherein food was the principal concern of life, is a remarkable fact. The law of hospitality, as administered by the American aborigines, tended to the final equalization of sub-

sistence. Hunger and destitution could not exist at one end of an Indian village or in one section of an encampment while plenty prevailed elsewhere in the same village or encampment. It reveals a plan of life among them at the period of European discovery which has not been sufficiently considered.

A singular illustration of the powerful influence of the custom upon the Indian mind came to my notice some years ago at the Seneca Reservation in New York. A Seneca chief, well to do in the world, with farm lands and domestic animals which afforded him a comfortable subsistence, had lost his wife by death, and his daughter, educated in the usages of civilized life, took the position of housekeeper. The old man, referring to the ancient custom, requested his daughter to keep the usual food constantly prepared ready to offer to any person who entered their house, saying that he did not wish to see this custom of their forefathers laid aside. Their changed condition, and particularly the adoption of the regular meals of civilized society, for the time of which the visitor might reasonably be expected to wait, did not in his mind outweigh the sanctity of the custom.

In July, 1743, John Bartram made a journey from Philadelphia to Onondaga to attend, with Conrad Weisar, a council of the Onondaga, Mohawk, Oneida, and Cayuga chiefs. At Shamokin he quartered with a trader who had an Indian wife, and at a village of the Delawares. "As soon as we alighted," he remarks, "they showed us where to lay our luggage, and then brought us a bowl of boiled squashes, cold. This I then thought poor entertainment, but before I came back I had learned not to despise good Indian food. This hospitality is agreeable to the honest simplicity of ancient times, and is so persistently adhered to that not only what is already dressed is immediately set before a traveler, but the most pressing business is postponed to prepare the best they can get for him, keeping it as a maxim that he must always be hungry. Of this we found the good effects in the flesh and bread they got ready for us." We have here a perfect illustration among the Delawares of the Iroquois rule to set food before a person when he first entered the house. Although they had in this case nothing better than boiled squash to offer, it was done immediately, after which they commenced

preparing a more substantial repast. Delaware and Iroquois usages were the same.

The council at Onondaga lasted two days, at the close of which they had each day a dinner in common. "This council [first day] was followed by a feast. At four o'clock we all dined together upon four great kettles of Indian-corn soup, which we emptied, and then every chief retired to his home. . . . . The conference [second day] held till three, after which we dined. The repast consisted of three great kettles of Indian-corn soup, or thin hominy, with dried eels and other fish boiled in it, and one kettle full of young squashes and their flowers boiled in water, and a little meal mixed. This dish was but weak food. Last of all was served a great bowlfull of Indian dumplings made of new soft corn cut or scraped off the cob, with the addition of some boiled beans, lapped well in Indian-corn leaves. This is good hearty provision."

"Again," he remarks, "we prepared for setting forward, and many of the chiefs came once more to make their farewells. Some of them brought us provisions for our journey. We shook hands again and set out at nine."

One of the earliest notices of the hospitality of the Indian tribes of the United States was by the expedition of Philip Amidas and Arthur Barlow, under the auspices of Sir Walter Raleigh, which visited the Algonkin tribes of North Carolina in the summer of 1584. They landed at the Island of Wocoken, off Albemarle Sound, when "there came down from all parts great store of people," whose chief was Granganimeo. "He was very just of his promises, for oft we trusted him, and would come within his day to keep his word. He sent us commonly every day a brace of ducks, conies, hares, and fish, sometimes melons, walnuts, cucumbers, pease, and divers roots. . . . . After this acquaintance, myself, with seven more, went thirty miles into the river Occam, that runneth toward the city Skicoack, and the evening following we came to an isle called Roanoak, from the harbor where we entered seven leagues: At the north end were nine houses, builded with cedar, fortified round with sharp trees [palisaded] and the entrance like a turnpike [turnspit]. When we came towards it, the wife of Granganimeo came running out

to meet us (her husband was absent), commanding her people to draw our boat ashore for beating on the billows. Others she appointed to carry us on their backs aland, others to bring our oars into the house for stealing. When we came into the other room (for there were five in the house) she caused us to sit down by a great fire; and after took off our clothes and washed them, of some our stockins, and some our feet in warm water; and she herself took much pains to see all things well ordered and to provide us victuals. After we had thus dried ourselves she brought us into an inner room, where she sat on the board standing along the house, somewhat like frumenty, sodden venison, and roasted fish; in like manner melons raw, boiled roots, and fruits of divers kinds. Their drink is commonly water boiled with ginger, sometimes with sassafras, and wholesome herbs. . . . . A more kind, loving people cannot be. Beyond this isle is the main land, and the great river Occam, on which standeth a town called Pomeiok."

This is about the first, if not the first, English picture we have of Indian life and of English and Indian intercourse in America. It is highly creditable to both parties; to the Indians for their unaffected kindness and hospitality, and to the English for their appreciation of both, and for the absence of any act of injustice. At the same time it was simply an application by the natives of their rules of hospitality among themselves to their foreign visitors, and not a new thing in their experience.

In the narrative of the expedition of Hernando de Soto to Florida in 1539, by a gentleman of Elvas, there are references to the customs of the Indian tribes of South Carolina, the Cherokees, Choctas, and Chichasas, and some of the tribes west of the Mississippi, whom the expedition visited one after another. They are brief and incomplete, but sufficiently indicate the point we are attempting to illustrate. It was a hostile rather than a friendly visitation, and the naturally free hospitality of the natives was frequently checked and turned into enmity, but many instances of friendly intercourse are mentioned in this narrative. "The fourth of April the governor passed by a town called *Altamaca*, and the tenth of the month he came to *Ocute*. The cacique sent him two thousand Indians with a present, to

wit, many conies and partridges, bread of maize, two hens, and many dogs." Again: "Two leagues before we came to Chiaha, there met him fifteen Indians loaded with maize which the cacique had sent; and they told him on his behalf that he waited his coming with twenty barns full of it." "At Coça the chief commanded his Indians to void their houses, wherein the governor and his men were lodged. There was in the barns and in the fields great store of maize and French beans. The country was greatly inhabited with many great towns and many sown fields which reached from one to the other." After crossing the Mississippi, of which De Soto was the first discoverer, he "rested in *Pacaha* forty days, in all which time the two caciques served him with great store of fish, mantles, and skins, and strove who should do him greatest service."

The justly celebrated Moravian missionary, John Heckewelder, obtained, through a long experience, an intimate acquaintance with the manners and customs of the Indian tribes. He was engaged in direct missionary labor, among the Delawares and Munsees chiefly, for fifteen years (1771–1786) on the Muskingum and Cuyahoga in Ohio, where, besides the Delawares and Munsees, he came in contact with the Tuscaroras and other tribes of Iroquois lineage. He was conversant with the usages and customs of the Indian tribes of Pennsylvania and New York. His general knowledge justifies the title of his work, "History, Manners, and Customs of the Indian Nations, who once inhabited Pennsylvania and the neighboring States," and gives the highest credibility to his statements.

In discussing the general character of the Indians, he remarks as follows: "They think that he [the Great Spirit] made the earth and all that it contains for the common good of mankind; when he stocked the country that he gave them with plenty of game, it was not for the benefit of a few, but of all. Everything was given in common to the sons of men. Whatever liveth on the land, whatsoever groweth out of the earth, and all that is in the rivers and waters flowing through the same, was given jointly to all, and every one is entitled to his share. From this principle hospitality flows as from its source. With them it is not a virtue, but a strict duty; hence they are never

in search of excuses to avoid giving, but freely supply their neighbors' wants from the stock prepared for their own use. They give and are hospitable to all without exception, and will always share with each other and often with the stranger to the last morsel. They rather would lie down themselves on an empty stomach than have it laid to their charge that they had neglected their duty by not satisfying the wants of the stranger, the sick, or the needy. The stranger has a claim to their hospitality, partly on account of his being at a distance from his family and friends, and partly because he has honored them with his visit and ought to leave them with a good impression on his mind; the sick and the poor because they have a right to be helped out of the common stock, for if the meat they have been served with was taken from the woods it was common to all before the hunter took it; if corn or vegetables, it had grown out of the common ground, yet not by the power of man, but by that of the Great Spirit."

This is a clear and definite statement of the principle of hospitality as it was observed by the Indian tribes at the epoch of their discovery, with the Indians' reasons on which the obligations rested. We recognize in this law of hospitality a conspicuous virtue of mankind in barbarism.

Lewis and Clarke refer to the usages of the tribes of the Missouri, which were precisely the same as those of the Iroquois. "It is the custom of all the nations on the Missouri," they remark, "to offer every white man food and refreshments when he first enters their tents." This was simply applying their rules of hospitality among themselves to their white visitors.

About 1837–'38 George Catlin wintered at the Mandan Village, on the Upper Missouri. He was an accurate and intelligent observer, and his work on the "Manners and Customs of the North American Indians" is a valuable contribution to American ethnography. The principal Mandan village, which then contained fifty houses and fifteen hundred people, was surrounded with a palisade. It was well situated for game, but they did not depend exclusively upon this source of subsistence. They cultivated maize, squashes, pumpkins, and tobacco in garden beds, and gathered wild berries and a species of turnip on the

prairies. "Buffalo meat, however," says Mr. Catlin, "is the great staple and staff of life in this country, and seldom, if ever, fails to afford them an abundant means of subsistence. . . . . During the summer and fall months they use the meat fresh, and cook it in a great variety of ways—by roasting, broiling, boiling, stewing, smoking, &c., and, by boiling the ribs and joints with the marrow in them, make a delicious soup, which is universally used and in vast quantities. The Mandans, I find, have no regular or stated times for their meals, but generally eat about twice in the twenty-four hours. The pot is always boiling over the fire, and any one who is hungry, either from the household or from any other part of the village, has a right to order it taken off and to fall to, eating as he pleases. Such is an unvarying custom among the North American Indians, and I very much doubt whether the civilized world have in their institutions any system which can properly be called more humane and charitable. Every man, woman, or child in Indian communities is allowed to enter any one's lodge, and even that of the chief of the nation, and eat when they are hungry, provided misfortune or necessity has drawn them to it. Even so can the poorest and most worthless drone of the nation, if he is too lazy to hunt or to supply himself; he can walk into any lodge, and every one will share with him as long as there is anything to eat. He, however, who thus begs when he is able to hunt, pays dear for his meat, for he is stigmatized with the disgraceful epithet of poltroon and beggar." Mr. Catlin puts the case rather strongly when he turns the free hospitality of the household into a right of the guest to entertainment independently of their consent. It serves to show that the provisions of the household, which, as he elsewhere states, consisted of from twenty to forty persons, were used in common, and that each household shared their provisions in the exercise of hospitality with any inhabitant of the village who came to the house hungry, and with strangers from other tribes as well. Moreover, he speaks of this hospitality as universal amongst the Indian tribes. It is an important statement, because few men in the early period of intercourse with the western tribes have traveled so extensively among them.

The tribes of the Columbia Valley lived upon fish, bread-

roots, and game. Food was abundant at certain seasons, but there were times of scarcity even in this favored area. Whatever provisions they had were shared freely with each other, with guests, and with strangers. Lewis and Clarke, in 1804–1806, visited in their celebrated expedition the tribes of the Missouri and of the Valley of the Columbia. They experienced the same generous hospitality whenever the Indian possessed any food to offer, and their account is the first we have at all special of these numerous tribes. Frequent references are made to their hospitality. The Nez Percés "set before them a small piece of buffalo meat, some dried salmon, berries, and several kinds of roots. Among these last is one which is round and much like an onion in appearance, and sweet to the taste. It is called *quamash*, and is eaten either in its natural state or boiled into a kind of soup or made into a cake, which is then called *pasheco*. After the long abstinence, this was a sumptuous treat; and we returned the kindness of the people by a few small presents, and then went on in company with one of the chiefs to a second village, in the same plain, at a distance of two miles. Here the party was treated with great kindness, and passed the night." Of another tribe they remark, "As we approached the village most of the women, though apprised of our being expected, fled with their children into the neighboring woods. The men, however, received us without any apprehension, and gave us a plentiful supply of provisions. The plains were now crowded with Indians, who came to see the persons of the whites and the strange things they brought with them; but as our guide was perfectly a stranger to their language we could converse by signs only."

The Indians of the Columbia, unlike the tribes previously named, boiled their food in wooden vessels, or in ground cavities lined with skins, by means of heated stones. They were ignorant of pottery. "On entering one of their houses he [Captain Clarke] found it crowded with men, women and children, who immediately provided a mat for him to sit on, and one of the party undertook to prepare something to eat. He began by bringing in a piece of pine wood that had drifted down the river, which he split into small pieces with a wedge made of the

elk's horn by means of a mallet of stone curiously carved. The pieces were then laid on the fire, and several round stones placed upon them. One of the squaws now brought a bucket of water, in which was a large salmon about half dried, and as the stones became heated they were put into the bucket until the salmon was sufficiently boiled for use. It was then taken out, put on a platter of rushes neatly made, and laid before Captain Clarke, and another was boiled for each of his men."

One or two additional cases, of which a large number are mentioned by these authors, will sufficiently illustrate the practice of hospitality of these tribes and its universality. They went to a village of seven houses of the Chilluckittequaw tribe and to the house of the chief. "He received us kindly," they remark, "and set before us pounded fish, filberts, nuts, the berries of the sacacommis, and white bread made of roots. . . . . The village is a part of the same nation with the village we passed above, the language of the two being the same, and their houses of similar form and materials, and calculated to contain about thirty souls. The inhabitants were unusually hospitable and good humored." While among the Shoshonees, and before arriving at the Columbia, they "reached an Indian lodge of brush inhabited by seven families of the Shoshonees. They behaved with great civility, and gave the whole party as much boiled salmon as they could eat, and added a present of several dried salmon and a considerable quantity of chokechinies;" and Captain Lewis remarks of the same people, that "an Indian invited him into his bower, and gave him a small morsel of boiled antelope, and a piece of fresh salmon roasted. This was the first salmon he had seen, and perfectly satisfied him that he was now on the waters of the Pacific." Thus far among the tribes we find a literal repetition of the rule of hospitality as practiced by the Iroquois. Mr. Dall, speaking of the Aleüts, says, "hospitality was one of their prominent traits," and Powers, of the Pomo Indians of California remarks, that they would "always divide the last morsel of dried salmon with genuine savage thriftlessness," and of the Mi-oal'-a-wa-gun, that, "like all California Indians, they are very hospitable."

Father Marquette and Lieutenant Joliet, who first discovered

the Upper Mississippi in 1673, had friendly intercourse with some of the tribes on its eastern bank, and were hospitably entertained by them. "The council being over, we were invited to a feast, which consisted of four dishes. The first was a dish of sagamite—that is, some Indian meal boiled in water and seasoned with grease—the master of ceremonies holding a spoonful of it, which he put thrice into my mouth and then did the like to M. Joliet. The second dish consisted of three fish, whereof he took a piece, and having taken out the bones and blown upon it to cool it, he put it into my mouth. The third dish was a large dog, which they had killed on purpose, but understanding that we did not eat this animal, they sent it away. The fourth was a piece of buffalo meat, of which they put the fattest pieces into our mouths."

Lower down the river, below the mouth of the Ohio, they fell in with another tribe, of whom they speak as follows: "We therefore disembarked and went to their village. They entertained us with buffalo and bear's meat and white plums, which were excellent. We observed they had guns, knives, axes, shovels, glass beads, and bottles in which they put their powder. They wear their hair long as the Iroquois, and their women are dressed as the Hurons."

In 1766 Jonathan Carver visited the Dakota tribes of the Mississippi, the Sauks and Foxes, and Winnebagos of Wisconsin, and the Ojibwas of Upper Michigan. He spoke generally of the hospitality of these tribes as follows: "No people are more hospitable, kind, and free than the Indians. They will readily share with any of their own tribe the last part of their provisions, and even with those of a different nation, if they chance to come in when they are eating. Though they do not keep one common stock, yet that community of goods which is so prevalent among them, and their generous disposition, render it nearly of the same effect." The "community of goods, which is so prevalent among them," is explained by their large households formed of related families, who shared their provisions in common. The "seven families of Shoshonees" in one house, and also the houses "crowded with men, women, and children,"

mentioned by Lewis and Clarke, are fair samples of Indian households in the early period.

We turn again to the southern tribes of the United States, the Cherokes, Choctas, Chickasas, and Confederated Creek tribes. James Adair, whose work was published in 1775, remarks generally upon their usages in the following language: "They are so hospitable, kind-hearted, and free, that they would share with those of their own tribe the last part of their own provisions, even to a single ear of corn; and to others, if they called when they were eating; for they have no stated meal time. An open generous temper is a standing virtue among them; to be narrow-hearted, especially to those in want, or to any of their own family, is accounted a great crime, and to reflect scandal on the rest of the tribe. Such wretched misers they brand with bad characters. . . . . The Cherokee Indians have a pointed proverbial expression to the same effect—*sinnawàh nà wóra,* the great hawk is at home. However, it is a very rare thing to find any of them of a narrow temper; and though they do not keep one promiscuous common stock, yet it is to the very same effect; for every one has his own family or tribe, and when one of them is speaking, either of the individuals or habitations of any of his tribe, he says, 'he is of my house,' or 'it is my house.' . . . . When the Indians are traveling in their own country, they inquire for a house of their own tribe [gens]; and if there be any, they go to it, and are kindly received, though they never saw the persons before—they eat, drink, and regale themselves with as much freedom as at their own table, which is the solid ground covered with a bear-skin. . . . . Every town has a state-house or synedrion, as the Jewish sanhedrim, where almost every night, the head men convene about public business; or the town's people to feast, sing, dance, and rejoice in the divine presence, as will fully be described hereafter. And if a stranger calls there, he is treated with the greatest civility and hearty kindness—he is sure to find plenty of their simple home fare, and a large cane-bed covered with the softened skins of bears or buffaloes to sleep on. But, when his lineage is known to the people (by a stated custom they are slow in greeting one another), his relations, if he has any

there, address him in a familiar way, invite him home, and treat him as a kinsman." All these tribes were organized in gentes or clans, and the gentes of each tribe were usually reintegrated in two or more phratries. It is the gens to which Mr. Adair refers when he speaks of the "family," "relations," and "lineage." We find among them the same rule of hospitality, substantially, as prevailed among the Iroquois.

It is a reasonable conclusion, therefore, that among all the tribes, north of New Mexico, the law of hospitality, as practiced by the Iroquois, was universally recognized; and that in all Indian villages and encampments without distinction the hungry were fed through the open hospitality of those who possessed a surplus. Notwithstanding this generous custom, it is well known that the Northern Indians were often fearfully pressed for the means of subsistence during a portion of each year. A bad season for their limited productions, and the absence of accumulated stores, not unfrequently engendered famine over large districts. From the severity of the struggle for subsistence, it is not surprising that immense areas were entirely uninhabited, that other large areas were thinly peopled, and that dense population nowhere existed.

Among the Village Indians of New Mexico the same hospitality is now extended to Americans visiting their pueblos, and which presumptively is simply a reflection of their usage among themselves and toward other tribes. In 1852 Dr. Tenbroeck, assistant surgeon United States Army, accompanied his command to the Moki pueblos. In his journal he remarks: "Between eleven and twelve to-day we arrived at the first towns of Moki. All the inhabitants turned out, crowding the streets and house-tops to have a view of the white men. All the old men pressed forward to shake hands with us, and we were most hospitably received and conducted to the governor's house, where we were at once feasted upon guavas and a leg of mutton broiled upon the coals. After the feast we smoked with them, and they then said that we should move our camp in, and that they would give us a room and plenty of wood for the men, and sell us corn for the animals." In 1858 Lieut. Joseph C. Ives was at the Moki Pueblo of *Mooshahneh* [Mi-shong-i-ni-vi].

"The town is nearly square," he remarks, "and surrounded by a stone wall fifteen feet high, the top of which forms a landing extending around the whole. Flights of stone steps lead from the first to a second landing, upon which the doors of the houses open. Mounting the stairway opposite to the ladder, the chief crossed to the nearest door and ushered us into a low apartment, from which two or three others opened towards the interior of the dwelling. Our host courteously asked us to be seated upon some skins spread along the floor against the wall, and presently his wife brought in a vase of water and a tray filled with a singular substance that looked more like sheets of thin blue wrapping paper rolled up into bundles than anything else that I have ever seen. I learned afterwards that it was made of corn meal, ground very fine, made into a gruel, and poured over a heated stone to be baked. When dry it has a surface slightly polished like paper. The sheets are folded and rolled together, and form the staple article of food with the Moki Indians. As the dish was intended for our entertainment, and looked clean, we all partook of it. It had a delicate fresh-bread flavor, and was not at all unpalatable, particularly when eaten with salt."

Lieutenant-Colonel (now General) Emory visited the Pima villages on the Gila River in 1846. "I rode leisurely in the rear through the thatched huts of the Pimos. Each abode consisted of a dome-shaped wickerwork about six feet high, and from twenty to fifty feet in diameter, thatched with straw or corn-stalks. In front is usually a large arbor, on top of which is piled the cotton in the pod for drying. In the houses were stowed watermelons, pumpkins, beans, corn and wheat, the three last articles generally in large baskets. Sometimes the corn was in baskets, covered with earth, and placed on the tops of the domes. A few chickens and dogs were seen, but no other domestic animals, except horses, mules, and oxen. . . . . Several acquaintances, formed in our camp yesterday, were recognized, and they received me cordially, made signs to dismount, and when I did so offered watermelons and pinole. Pinole is the heart of Indian corn, baked, ground up, and mixed with sugar. When dissolved in water it affords a delicious beverage; it quenches thirst, and is very nutritious. . . . . The population of the Pimos

and Maricopas together is estimated variously at from three to ten thousand. The first is evidently too low. This peaceful and industrious race are in possession of a beautiful and fertile basin. Living remote from the civilized world, they are seldom visited by whites, and then only by those in distress, to whom they generously furnish horses and food." In this case and in those stated by Lieutenant Ives and Dr. Tenbroeck we find a repetition of the Iroquois rule to set food before the guest when he first enters the house.

With respect to the Village Indians of Mexico, Central and South America, our information is, in the main, limited to the hospitality extended to the Spaniards; but it is sufficient to show that it was a part of their plan of life, and, as it must be supposed, a repetition of their usages in respect to each other. In every part of America that they visited, the Spaniards, although often in numbers as a military force, were assigned quarters in Indian houses, emptied of their inhabitants for that purpose, and freely supplied with provisions. Thus at Zempoala "the lord came out, attended by ancient men, two persons of note supporting him by the arms, because it was the custom among them to come out in that manner when one great man received another. This meeting was with much courtesy and abundance of compliments, and people were already appointed to find the Spaniards quarters and furnish provisions." When near Tlascala the Tlascallans "sent three hundred turkeys, two hundred baskets of cakes of *teutli*, which they call tamales, being about two hundred arrobas; that is, fifty hundred weight of bread, which was an extraordinary supply for the Spaniards, considering the distress they were in;" and when at Tlascala, Cortes and his men "were generously treated, and supplied with all necessaries." They "entered Cholula and went to a house where they lodged altogether, and their Indians with them, although upon their guard, being for the present plentifully supplied with provisions." Although the Spaniards numbered about four hundred, and their allied Indians about a thousand, they found accommodations in a single joint tenement house of the aboriginal American model. Attention is called to this fact, because we shall find the Village Indians, as a rule, living in

large houses, each containing many apartments, and accommodating five hundred or more persons. The household of several families of the northern Indians reappears in the southern tribes in a much greater household of a hundred or more families in a single joint tenement house, but not unlikely broken up into several household groups. The pueblo consisted sometimes of one, sometimes of two or three, and sometimes of a greater number of such houses. The plan of life within these houses is not well understood; but it can still be seen in New Mexico, and it is to be hoped it will attract investigation.

Speaking of the Maya Indians of Yucatan, Herrera remarks that "they are still generous and free-hearted, so that they will make everybody eat that comes into their houses, which is everywhere practiced in travelling." This is a fair statement of the Iroquois law of hospitality found among the Mayas, practiced among themselves and towards strangers from other tribes. When Grijalva, about 1517, discovered the Tabasco River, he held friendly intercourse with some of the tribes of Yucatan. "They immediately sent thirty Indians loaded with roasted fish, hens, several sorts of fruit, and bread made of Indian wheat." When Cortes, in 1525, made his celebrated expedition to Honduras, he passed near the pueblo of Palenque and near that of Copan without being aware of either, and visited the shore of Lake Peten. "Being well received in the city of Apoxpalan, Cortes and all the Spaniards, with their horses, were quartered in one house, the Mexicans being dispersed into others, and all of them plentifully supplied with provisions during their stay." They numbered one hundred and fifty Spanish horse and several hundred Aztecs. It was at this place, according to Herrera, that Quatemozin, who accompanied Cortes as a prisoner, was barbarously executed at his command. Cortes next visited an Island in Lake Peten, where he was sumptuously entertained by *Canec*, the chief of the tribe, where they "sat down to dinner in stately manner, and *Canec* ordered fowls, fish, cakes, honey, and fruit."

In South America the same account of the hospitality of the Indian tribes is given by the early explorers. About the year 1500 Christopher Guerra made a voyage to the coast of Vene-

zuela: "They came to an anchor before a town called Curiana, where the Indians entreated them to go ashore, but the Spaniards being no more than thirty-three in all durst not venture. . . . . At length, being convinced of their sincerity, the Spaniards went ashore, and being courteously entertained, staid there twenty days. They plentifully supplied them for food with venison, rabbits, geese, ducks, parrots, fish, bread made of maize or Indian wheat, and other things, and brought them all the game they would ask for. . . . . They perceived that they kept markets or fairs, and that they made use of jars, pitchers, pots, dishes, and porringers, besides other vessels of several shapes." Pizarro found the same custom among the Peruvians and other tribes of the coast. At the time of his first visit to the coast of Peru he found a female chief by whom he was entertained. "The lady came out to meet them with a great retinue, in good order, holding green boughs and ears of Indian wheat, having made an arbor where were seats for the Spaniards, and for the Indians at some distance. They gave them to eat fish and flesh dressed in several ways, much fruit, and such bread and liquor as the country afforded." When on the coast of Tumbez, and before landing, "ten or twelve floats were immediately sent out with a plenty of provisions, fruits, pots of water, and of chica, which is their liquor, as also a lamb." After entering Peru, on his second visit to the coast, "Atahuallpa's messengers came and presented the governor with ten of their sheep from the Inca, and some other things of small value, telling him very courteously that Atahuallpa had commanded them in inquire what day he intended to be at Caxamalca, that he might have provisions on the way. . . . . The next day more messengers came from Atahuallpa with provisions, which he received with thanks." The native historian, Garcilasso de la Viga, remarks: "Nor were the Incas, among their other charities, forgetful of the conveniences for travellers, but in all the great roads built houses or inns for them, which they called *corpahuaci,* where they were provided with victuals and other necessaries for their journies out of the royal stores; and in case any traveller fell sick on the way, he was there attended and care taken of him in a better manner perhaps than at his own home."

These illustrations, which might be multiplied, are sufficient to show the universality of the practice of hospitality among the Indian tribes of America at the epoch of European discovery. Among all these forms, as stated by different observers, the substance of the Iroquois law of hospitality is plainly found, namely: If a man entered an Indian house, whether a villager, a tribesman, or a stranger, and at whatever hour of the day, it was the duty of the women of the house to set food before him. An omission to do this would have been a discourtesy amounting to an affront. If hungry, he ate, if not hungry, courtesy required that he should taste the food and thank the giver. It is seen to have been a usage running through three ethnic conditions of the Indian race, becoming stronger as the means of subsistence increased in variety and amount, and attaining its highest development among the Village Indians in the Middle Status of barbarism. It was an active, well-established custom of Indian society, practiced among themselves and among strangers from other tribes, and very naturally extended to Europeans when they made their first appearance among them. Considering the number of the Spaniards often in military companies, and another fact which the aborigines were quick to notice, namely, that a white man consumed and wasted five times as much as an Indian required, their hospitality in many cases must have been grievously overtaxed.

Attention has been called to this law of hospitality, and to its universality, for two reasons: firstly, because it implies the existence of common stores, which supplied the means for its practice; and secondly, because, wherever found, it implies communistic living in large households. It must be evident that this hospitality could not have been habitually practiced by the Iroquois and other northern tribes, and much less by the Village Indians of Mexico, Central and South America, with such uniformity, if the custom in each case had depended upon the voluntary contributions of single families. In that event it would have failed oftener than it would have succeeded. The law of hospitality, as administered by the American aborigines, indicates a plan of life among them which has not been carefully studied, nor have its effects been fully appreciated. Its explanation must

be sought in the ownership of lands in common, the distribution of their products to households consisting of a number of families and the practice of communism in living in the household. Common stores for large households, and possibly for the village, with which to maintain village hospitality, are necessary to explain the custom. It could have been maintained on such a basis, and it is difficult to see how it could have been maintained on any other. The common and substantially universal practice of this custom, among the American Indian tribes, at the period of their discovery, among whom the procurement of subsistence was their vital need, must be regarded as evidence of a generous disposition, and as exhibiting a trait of character highly creditable to the race.—L. H. MORGAN, *Houses and House-Life of the American Aborigines* 44–62 (*U. S. Geogr. and Geol. Survey of the Rocky Mountain Region: Contributions to American Ethnology,* Vol. IV).

Moral control—the modification of the natural disposition and behavior of men in view of the fact that they are members of a society—may be regarded as the great problem of early times. In Part II, in connection with the Australian initiation ceremonies and food-regulations we saw how this control was secured through habit and custom. Sumner's *Folkways* is a volume treating this aspect of society extensively. In the papers of Howitt, and Spencer and Gillen on the influence of old men in Australia and Australian tribal government we see how custom is both carried out and modified through influential persons. Morgan's account of the Iroquois confederacy brings us to the stage of control through general ideas and the formation of the state. The Central Australians present a state of society as it probably existed almost in the beginning, and the Iroquois had almost reached the stage of white society as it is.

The older idea that the clan system as represented by the Iroquois was at one time universal in America has been revised by later investigations. See, e. g., Swanton, "The Social Organization of American Tribes," *American Anthropologist,* N. S., 7:663–73.

The volumes by Westermarck, Nieboer and Steinmetz, listed in the bibliography below, and dealing with offenses and punishments, blood-revenge and compensation, human sacrifice, the duel, the ordeal, cannibalism, the treatment of women, duties to gods, property, slavery, etc., are especially recommended as supplementary to Part VII.

Westermarck's work perhaps affords the best example of a method of presenting ethnological materials which is very useful, but which has its limitations. It corresponds with the method of arranging materials in museums developed by Pitt-Rivers in England a number of years ago. By this method all the knives, throwing-sticks, or other articles of a particular kind were brought together in one place, with a view to exhibiting the steps in the development of this article—and some very pretty effects were thus secured, as can be seen from the two papers by Pitt-Rivers included in this volume. But our great museums are now recognizing (with some unfortunate exceptions) that it is on the whole better to arrange materials on the principle of presenting the culture of a given region as a whole. No object can be completely understood when separated from the whole culture of which it is a part, and no culture can be understood when its fragments are dislocated. On the other hand, when cultures are displayed by regions and understood as wholes, it is still possible to compare the different regions and the different cultural elements in the different regions.

Similarly after reading Westermarck's *Moral Ideas* (and it is a good thing to do this first), the student should examine moral practices in connection with the whole culture of certain selected societies. Take, for instance, the Pueblo Indians, as presented by Cushing, Stevenson, Holmes, Fewkes, and others, and study their moral life in connection with their physical environment and whole material culture. Compare the particular practices of the different Pueblos, and compare them also with those of such contrasted peoples as the Eskimo, as presented by Boas, Nelson, Murdock, and others. The

intensive and admirable study of the Chukchee by Bogoras also affords an excellent opportunity to study the culture of a people as a whole. This should be first compared with the equally admirable study of the Koryak by Jochelson. The two can then be compared with the culture of the Zuñi. *The Reports of the Cambridge Expedition to Torres Straits,* and the works of Rivers (on the Todas), Skeat and Blagden, van der Sande, von den Steinen, Overbergh, Spencer and Gillen, Codrington, and Hurgronje are among the convenient starting-points for other regions. This method should, of course, be applied to any activity in which the student is interested—religion, magic, myth, art, marriage, invention, mind, etc.

It is a noticeable defect in the work of the type of Westermarck and Herbert Spencer that the writers cannot reconcile with their theories all the ethnological statements which they collect and present. When the fragments are counted and compared there always remain some exceptions, which are treated as exceptions and counted as negligible. The explanation of all the facts can be effected, if at all, only through the regional study of cultures and the application of the standpoint of attention, habit, and crisis.

1 ACHELIS, T. "Ethnologie und Ethik," *Zeits. f. Ethn.*, 23:66–77.

2 ACHELIS, T. "Ueber die Organisation und Bedeutung der Geheimbünde," *Globus*, 64:385–90.

3 AMMON, O. *Die Gesellschaftsordnung und ihre natürlichen Grundlagen.* Jena, 1896.

*4 AMMON, O. "Der Ursprung der socialen Triebe," *Zeits. f. Socialwiss.*, 4:1–12; 101–13.

*5 ANDREE, R. *Die Anthropophagie.* Leipzig, 1887.

*6 ANDREE, R. "Ethnographische Bemerkungen zu einigen Rechtsgebräuchen. I. Jagdrecht; II. Die Asyle," *Globus*, 38:286–88; 301–2.

*7 ANDREE, R. *Ethnographische Parallelen und Vergleiche* (Neue Folge), "Eigentumszeichen," 74–85; "Beschneidung," 166–212.

[Andree's paper on circumcision is excellent.]

8 ANDRIAN-WERBURG, F. VON. "Die kosmologischen und kosmogonischen Vorstellungen primitiver Völker," *Deutsch. Gesellsch. für Anth., Ethn. u. Urgesch., Correspondenzblatt*, 28: 127–39.

9 ATKINSON, J. J. *Primal Law.* New York, 1903.

[Worthy of note. Assumes an original condition of control through powerful males, as among gregarious animals.]

*10 BANDELIER, A. F. "On the Art of War and Mode of Warfare of the Ancient Mexicans," *Peabody Mus. Am. Arch. and Ethn., Rep.*, 10: 95–161.

*11 BANDELIER, A. F. "Social Organisation and Mode of Government of the Ancient Mexicans," *Peabody Mus. Arch. and Ethn., Rep.*, 12:557–699.

*11*a* BANDELIER, A. F. "On the Distribution and Tenure of Lands . . . . among the Ancient Mexicans," *Peabody Mus. Arch. and Ethn., Rep.*, 11:385–448.

[The 10th, 11th, and 12th Reports of the Peabody Museum are bound in Vol. II. They are of great importance.]

12 BAUMANN, O. "Gottesurteile bei den Swahili," *Globus*, 76:371–72.

13 BEAUCHAMP, W. M. "Permanency of Iroquois Clans and Sachemships," *Am. Antiq.*, 8:82–91.

*14 BOAS, F. "The Social Organization and Secret Societies of the Kwakiutl Indians," *U. S. Nat. Mus., Rep.* for 1895:315–738.

[Very important.]

*15 Boas, F. "Property Marks of the Alaskan Eskimo," *Am. Anth.* N. S., 1:601–13.

*16 Bourke, J. G. "The Medicine-Men of the Apache," *Bur. Am. Ethn., Rep.*, 9:443–603.

17 Bülow, W. von. "Das ungeschriebene Gesetz der Samoaner," *Globus*, 69:191–95.

*18 Cardi, C. N. de. "Ju-Ju Laws in the Niger Delta," *Jour. Anth. Inst.*, 29:51–61.

19 Chamberlain, B. H. "Translation of 'Ko-ji-ki'-Records of Ancient Matters," *Asiat. Soc. of Japan, Trans.*, Supplement, 10; 1–369.

20 Clement, E. W. "Instructions of a Mito Prince to His Retainers," *Asiat. Soc. of Japan, Trans.*, 26:115–54.

*21 Codrington, R. H. "On Social Regulations in Melanesia," *Jour. Anth. Inst.*, 18:306–13.

*22 Connolly, R. M. "Social Life in Fanti-Land," *Jour. Anth. Inst.*, 26:128–53.

23 Couty, L. *L'esclavage au Brésil.* Paris, 1881.

24 Cunow, H. *Verwandschaftsorganisationen der Australneger.* Stuttgart, 1894.

*25 Dannert, E. *Zum Rechte der Herero.* Berlin, 1906.

26 Dautremer, J. "The Vendetta or Legal Revenge in Japan," *Asiat. Soc. of Japan, Trans.*, 13:82–89.

27 Dennett, R. E. *At the Back of the Black Man's Mind*, 24–25 [Law].

*28 Dewey, J. *Ethics.* New York, 1908.
[A lecture published by Columbia University Press.]

*29 Dewey, J. "The Evolutionary Method as Applied to Morality," *Philos. Rev.*, 11:353–71.

30 Dimitroff, Z. *Die Geringschätzung der menschlichen Lebens und ihre Ursachen bei den Naturvölkern.* Leipzig, 1891.

*31 Dorsey, J. O. "Omaha Sociology," *Bur. Am. Ethn., Rep.*, 3:312–33 [War]; 356–70 [Law].

*32 Dorsey, J. O. "Siouan Sociology," *Bur. Am. Ethn., Rep.*, 15:205–44.

33 Dutkheim, E. "Sur le totémisme," *L'année sociol.*, 5:82–121.

*33a Enright, W. G. "The Initiation Ceremonies of the Aborigines of Port Stephens, N. S. Wales," *Roy. Soc. of N. S. Wales, Jour.*, 33: 115–24.

34 Ehrenreich, P. "Neue Mitteilungen über die Guayki (Steinzeitmenschen) in Paraguay," *Globus*, 73:73–78.

35 Ellis, W. G. "The Amok of the Malays," *Jour. Ment. Sci.*, 39: 325–38.

36 Enjoy, P. d'. "Associations, congrégations et sociétés secrètes chinoises," *Soc. d'Anth. de Paris, Bul.* 5, sér. 5:373–86.

37 Enjoy, P. d'. "Le pays des Tsings: étude de l'organisation politique de la Chine," *Soc. d'Anth. de Paris, Bul.* 5, sér. 3:686–94.

38 Enjoy, P. d'. "Pénalités chinoises," *Soc. d'Anth. de Paris, Bul.* 5, sér. 6:247–54.

39 Fewkes, J. W. "Property-Right in Eagles among the Hopi," *Am. Anth.*, N. S., 2:690–707.

40 Fewkes, J. W. "Tusayan Totemic Signatures," *Am. Anth.*, 10: 1–11.

*41 Fewkes, J. W., and Stephens, A. M. "The Na-ác-rai-ya: A Tusayan Initiation Ceremony," *Jour. Am. Folk-Lore*, 5:189–221.

42 Fison, L. "Land Tenure in Fiji," *Jour. Anth. Inst.*, 10:332–52.

*43 Fletcher, A. C. "The Import of the Totem," *Smithsonian Inst., Ann. Rep.* for 1897:577–86.

*44 Fletcher, A. C. "The Significance of the Scalp-Lock," *Jour. Anth. Inst.*, 27:436–50.

45 Frauenstädt, P. *Blutrache und Todschlagsühne im deutschen Mittelalter.* Leipzig, 1881.

46 Frazer, J. G. *Lectures on the Early History of Kingship.* London, 1905. [Extracted from 3d ed. of *The Golden Bough.*]

47 Frazer, J. G. *Totemism.* Edinburgh, 1887.

48 Frazer, J. G. "Observations on Central Australian Totemism," *Jour. Anth. Inst.*, 28:281–86.

49 Frere, H. B. "On the Laws Affecting the Relations between Civilised and Savage Life, as Bearing on the Dealings of Colonists and Aborigines," *Jour. Anth. Inst.*, 11:313–54.

50 Frere, H. B. "Systems of Land Tenure . . . . in S. Africa," *Jour. Anth. Inst.*, 12:258–77.

*51 Friederici, G. *Skalpieren und ähnliche Kriegsgebräuche in Amerika.* Braunschweig, 1906.

[An abstract, "Scalping in America," is printed in *Smiths. Inst., Rep.* for 1906: 423–38.]

51*a* Friederici, G. "Die Squaw als Verräterin," *Internat. Arch. f. Ethnog.*, 18:121–24.

52 Frobenius, L. "Die Masken und Geheimbünde Afrikas," *Kaiserlich-Leopoldinisch-Carolinische deutsche Akad. der Naturvorscher, Abhandl.*, 74:1–278.

53 Gennep, A. van. *Tabou et totémisme à Madagascar.* Paris, 1904.

54 Gennep, A. van. "Les 'Wasm' ou marques de propriété des Arabes," *Internat. Archiv f. Ethnog.*, 15:85–98.

*54*a* Giddings, F. H. *Pirnciples of Sociology,* "Zoögenic, Anthropogenic and Ethnogenic Association," 199–298.

55 Glassberg, A. *Die Beschneidung in ihrer geschichtlichen, ethnographischen, religiösen und medicinischen Bedeutung.* Berlin, 1896.

56 Gomme, G. L. "On the Evidence for Mr. McLennan's Theory of the Primitive Human Horde," *Jour. Anth. Inst.*, 17:118–33.

57 Grigsby, W. E. "The Legacy of Iyeyasu," *Asiat. Soc. of Japan, Trans.*, 3, Pt. 2:118–25.

*58 Grinnell, G. B. "Social Organization of the Cheyennes," *Internat. Cong. of Americanists, Trans.*, 1902:135–146.

*59 Grinnell, G. B. "Tenure of Land among the Indians," *Am. Anth.*, N. S., 9:1–11.

60 Gubbins, J. H. "The Feudal System in Japan under the Tokugawa Shoguns," *Asiat. Soc. of Japan, Trans.*, 15:131–42.

61 Gubbins, J. H. "Laws of the Tokugawa Period," *Asiat. Soc. of Japan, Trans.*, 26:154–62.

62 Haddon, A. C. "Totemism," *Man*, 1:149–51.

*63 Haddon, A. C. *Cambridge Anth. Exped. to Torres Straits., Rep.*, "Initiation," 5:208–21; "Regulation of Public Life," 5:263–71; "Morals," 5:272–79; "Quarrels and Warfare," 6:189–91.

*64 Haddon and Rivers. *Cambridge Anth. Exped. to Torres Straits, Rep.*, "Totemism," 5:153–93.

*65 Haddon and Watkin. *Cambridge Anth. Exped. to Torres Straits, Rep.*, "Warfare," 5:298–307.

66 Harper, R. F. *The Code of Hammurabi.* Chicago, 1904.

*67 Hartland, E. S. "Totemism and Some Recent Discoveries," *Folk-Lore*, 11:52–80.

*68 Hauri, J. *Der Islam in seinem Einfluss auf das Leben seiner Bekenner.* Leyden, 1881.

69 Hellwig, A. *Das Asylrecht der Naturvölker.* Berlin, 1903.

70 Hellwig, A. *Beiträge zum Asylrecht von Ozeanien.* Stuttgart, 1906.

*71 HENDREN, S. R. "The Government and Religion of the Virginia Indians," *Johns Hopkins Univ. Studies in Hist. and Polit. Sci.*, 13: 543–96.

72 HEWITT, J. N. B. "Era of the Formation of the Historic League of the Iroquois," *Am. Anth.*, 7:61–67.

*73 HILDEBRAND, R. *Recht und Sitte auf den verschiedenen wirtschaftlichen Kulturstufen.* Jena, 1896.

*76 HOBHOUSE, L. T. *Morals in Evolution*, "Forms of Social Organisation," 1:42–78; "Law and Justice," 1:79–133; "The Relations between Communities," 1:240–80; "Class Relations," 1:281–331; "Property and Poverty," 1:332–63.

*77 HOFFMAN, W. J. "The Mide'wiwin or 'Grand Medicine Society' of the Ojibwa," *Bur. Am. Ethn., Rep.*, 7:143–300.

*79 HOWITT, A. W. *The Native Tribes of South-East Australia*, "Tribal Organisation," 34–87; "Social Organisation," 88–155; "Tribal Government," 295–354; "Initiation Ceremonies, 509–677.

80 HOWITT, A. W., AND FISON, L. "On the Deme and the Horde," *Jour. Anth. Inst.*, 14:142–68.

81 JOHNSTON, SIR H. *George Grenfell and the Congo*, "Social Laws," 2:665–725.

82 JOLLY, J. *Recht und Sitte der Indo-Aryer.* Strasburg, 1896.

*82a KÖHLER, A. *Verfassung, soziale Gliederung, Recht und Wirtschaft der Tuareg.* Gotha, 1904.

83 KOHLER, J. *Rechtsvergleichende Studien über islamitisches Recht, das Recht der Berber, das chinesisches Recht und das Recht auf Ceylon.* Berlin, 1889.

*84 KOHLER, J. "Recht und Völkerpsychologie," *Politisch-Anth. Rev.*, 1:385–90.

[Kohler has nine additional papers on the law of African, Papuan, American Indian, and Australian tribes, in Vols. III, VII, XII, XIV, and XV of the *Zeits. für vergleichende Rechtswissenschaft.*]

*85 KOVALEVSKY, M. *Modern Customs and Ancient Laws of Russia.* London, 1891.

86 KOVALEVSKY, M. "The *Lex Barbarorum* of the Daghestan," *Jour. Anth. Inst.*, 25:112–16.

*87 KOVALEVSKY, M. "Les origines du devoir," *Rev. internat. de sociologie*, 2:89–93.

[For Kovalevsky's book on the origin and evolution of property and the family see bibliography of Part IV.]

88 LANDTMAN. *The Origin of Priesthood.* Ekenacs (Finland), 1905.

*88a LASCH, R. *Der Eid, seine Entstehung und Beziehung zu Glaube und Brauch der Naturvölker.* Stuttgart, 1908.

*89 LASCH, R. "Der Selbstmord aus erotischen Motiven bei den primitiven Völkern," *Zeits. f. Socialwiss.*, 2:578–85.

90 LAVELAYE, É. *Primitive Property.* (Trans. by G. K. L. Marriott.) London, 1878.

91 LAZARUS, M. "Ueber den Ursprung der Sitten," *Zeits. für Völkerpsych. und Sprachwiss.*, 1:437–77.

92 LETOURNEAU, C. "Le passé et l'avenir de la guerre," *Rev. mensuelle de l'école d'anth.*, 3:269–91.

93 LETOURNEAU, C. *L'évolution de la mòrale.* Paris, 1887.

94 LETOURNEAU, C. *L'évolution de la propriété.* Paris, 1889.

95 LETOURNEAU, C. *L'évolution politique.* Paris, 1890.

96 LETOURNEAU, C. *L'évolution juridique.* Paris, 1891.

[None of Letourneau's work is very important, but he was industrious.]

97 LÖWENSTIMM, A. *Aberglaube und Strafrecht: Ein Beitrag zur Erforschung des Einflusses der Volksanschauungen auf die Verübung von Verbrechen.* Berlin, 1897.

98 MASS. "Takä-käi-käi Tabu," *Zeits. für Ethn.*, 37:153–62.

*99 MACDONALD, J. "Manners, Customs, Superstitions and Religions of South African Tribes," *Jour. Anth. Inst.*, 19:264–96; 20:113–40.

100 MACLEAN, J. *A Compendium of Kafir Laws and Customs.* Mount Coke, 1858.

101 MAINE, H. S. *Lectures on the Early History of Institutions.* London, 1875.

[Maine's works have still some value. His patriarchal theory is now discredited.]

102 MAINE, H. S. *Ancient Law.* London, 1885.

103 MAINE, H. S. *Popular Government.* London, 1885.

104 MAINE, H. S. *Dissertations on Early Law and Custom.* London, 1891.

105 MAINE, H. S. *Village Communities in the East.* London, 1895.

*105a MARKOVIC, M. *Die Serbische Hauskommunion und ihre Bedeutung in der Vergangenheit und Gegenwart.* Leipzig, 1903.

106 MARRIOTT, H. P. F. "The Secret Societies of West Africa," *Jour. Anth. Inst.*, 29:21–27.

*107 MARTIUS, K. F. P. VON. *Von dem Rechtszustande unter den Ureinwohnern Brasiliens.* München, 1832.

108 MATHEWS, R. H. "Some Initiation Ceremonies of the Aborigines of Victoria," *Zeits. f. Ethn.*, 37:872–79.

109 MATHEWS, R. H. "The Bo-a, or Initiation Ceremonies of the Kamilaroi Tribe," *Jour. Anth. Inst.*, 24:411–27; 25:318–39.

110 MATHEWS, R. H. "The Burbung or Initiation Ceremonies of the Murrumbigbee Tribes," *Roy. Soc. of N. S. Wales, Jour. and Proc.*, 31:111–54.

110a MATHEWS, R. H. "The Group Divisions and Initiation Ceremonies of the Barkunjee Tribes," *Roy. Soc. of N. S. Wales, Jour.*, 32:241–55.

111 MATHEWS, R. H. "The Burbung of the Wiradthuri Tribes," *Jour. Anth. Inst.*, 25:295–318; 26:272–85.

112 MATHEWS, R. H. "The Keeparra Ceremony of Initiation," *Jour. Anth. Inst.*, 26:320–40.

113 MATHEWS, R. H. "Totemic Divisions of Australian Tribes," *Roy. Soc. of N. S. Wales, Jour. and Proc.*, 31:154–77.

114 MATTHEWS, W. "The Study of Ethics among the Lower Races," *Jour. Am. Folk-Lore*, 12:1–9.

115 MAUER, F. "Israelitisches Asylrecht," *Globus*, 90:24, 25.

116 MAZZARELLA, G. "Die neuen Methoden der ethnologischen Jurisprudenz," *Archiv f. Anth.*, 33:227–43.

*117 MERKER, M. *Rechtsverhältnisse und Sitten der Wadschagga.* Gotha, 1902.

118 MOONEY, J. "The Powhatan Confederacy, Past and Present," *Am. Anth.*, N. S., 9:129–52.

*119 MORGAN, L. H. *Ancient Society*, "Organisation of Society upon the Basis of Sex," 49–61; "The Iroquois Gens, Phratry—Tribe—Confederacy," 62–150; "Gentes in Other Tribes of the Ganowánian Family," 151–85; "The Aztec Confederacy," 186–214; "Growth of the Idea of Property," 537–54.

*120 MORGAN, L. H. *Houses and House-Life of the American Aborigines*, "Social and Governmental Organisation," 1–41; "The Law of Hospitality and its General Practice," 42–62; "Communism in Living," 62–78; "Usages and Customs with Respect to Land and Food," 79–103.

*121 MORGAN, L. H. *League of the Iroquois*, 51–137. [Tribal Organization.]

122 MÜCKE, J. R. *Horde und Familie in ihrer urgeschichtlichen Entwickelung: Eine neue Theorie auf statistischer Grundlage.* Stuttgart, 1895.

123 MUMFORD, E. "The Origins of Leadership," *Am. Jour. Sociol.*, 12:216–40; 367–97; 500–31.

*124 NIEBOER, H. J. *Slavery as an Industrial System.* The Hague, 1900. [A unique work of great merit.]

125 OPPEL, A. "Erwerb und Besitz bei den Papua von Neuguinea," *Globus*, 54:121–25.

126 PATTETTA, F. *Le Ordalie.* Torino, 1890.

*127 PAYNE, E. J. *History of the New World*, 2:1–63. [Tribal organization.]

128 PEET, S. D. "Secret Societies and Sacred Mysteries," *Internat. Cong. of Anth., Mem.*, 176–89.

129 PETRUCCI, R. *Les origines naturelles de la propriété.* (*Instituts Solvay. Travaux de l'Inst. de Sociologie, Notes et Mém.*, 3.) Brussels, 1905.

130 POSADA, H. *Théories modernes sur les origines de la famille, de la société, de l'état.* Paris, 1906. (Trans. from the Spanish.)

131 POST, A. H. *Afrikanische Jurisprudenz.* Oldenburg, 1887.

[Post has an imposing array of books on ethnological jurisprudence, but his work is not excellent. He was a compiler from indifferent sources without the power of interpretation.]

*131*a* POWELL, B. H. BADEN-. *The Land-Systems of British India.* Oxford, 1892.

132 POWELL, J. W. "Sociology, or the Science of Institutions," *Bur. Am. Ethn., Rep.*, 20:lix-cxxxviii.

133 PROKSCH, O. *Die Blutrache bei den vorislamischen Arabern und Mohammeds Stellung zu ihr.* Leipzig, 1899.

*134 RATZEL, F. *History of Mankind*, "The State," 1:129–41; "The Family and the State in Oceania," 1:267–300; "The Malay Family, Community, State," 1:437–52; "The Family and Society in America," 2:124–43.

*135 RIVERS, W. H. R. *Cambridge Anth. Exped. to Torres Straits, Rep.*, "Social Organisation," 6:169–84.

*136 RIVERS, W. H. R. *The Todas*, "Social Organisation," 540–69; "Relations with Other Tribes," 628–42; "The Clans of the Todas," 643–78.

136*a* ROSE, H. A. *Compendium of the Punjab Customary Law.* Lahore, 1907.

*137 ROTH, H. L. "On Salutations," *Jour. Anth. Inst.*, 19:164–81.

138 ROTH, H. L. "On the Signification of Couvade," *Jour. Anth. Inst.*, 22:204–41.

*139 Roth, W. E. "Notes on Government, Morals and Crime." *N. Queensl. Ethnog.*, Bul. No. 8. [See Bibliography 10.]

*140 Sarbah, J. M. *Fanti Customary Laws.* London, 1904.

141 Sartori, P. "Ueber das Bauopfer," *Zeits. f. Ethn.*, 30:1–54.

142 Schmoller, G. "Die Urgeschichte der Familie, Mutterrecht und Gentilverfassung," *Jahrb. f. Gesetzgebung*, 23:1–21.

*143 Schurtz, H. *Altersklassen und Männerbünde.* Berlin, 1902.
[The best German work on primitive secret societies and tribal organization.]

*144 Schurtz, H. *Die Speiseverbote.* Hamburg, 1893.

145 Senfft, A. "Die Rechtssitten der Jap-Eingeborenen," *Globus*, 91: 139–43; 149–53; 171–75.

146 Sharp, F. C. "A Study of the Influence of Custom on the Moral Judgment," *University of Wisconsin, Bul.*, No. 236.

147 Sibree, J. "Curious Words and Customs Connected with Chieftainship and Royalty among the Malagasy," *Jour. Anth. Inst.*, 21: 215–30.

148 Simmel, G. "The Sociology of Conflict," *Am. Jour. Sociol.*, 9:490–525; 672–89.

149 Simmel, G. "The Sociology of Secrecy," *Am. Jour. Sociol.*, 11:441–98.

*150 Skeat and Blagden. *Pagan Races of the Malay Peninsula,* "The Social Order," 1:494–520; "Maturity Customs and Beliefs," 2: 28–54.

151 Spencer, B. "Some Remarks on Totemism as Applied to Australian Tribes," *Jour. Anth. Inst.*, 28:275–80.

*152 Spencer, B., and Gillen, F. J. *The Native Tribes of Central Australia,* "The Social Organisation of the Tribes," 55–91; "The Totems," 112–211; "Initiation Ceremonies," 212–386; "Customs Concerned with Knocking Out of Teeth, etc.," 450–75; "The Customs of Kurdaitcha," 476–96.

*153 Spencer, B., and Gillen, F. J. *The Northern Tribes of Central Australia,* "Social Organisation of the Tribes," 70–132; "Totems," 143–327; 593–454; "Initiation Ceremonies," 328–92; "The Atninga or Avenging Party," 556–68.

*154 Spencer, H. *The Principles of Sociology,* "Ceremonial Institutions," 2:3–228; "Political Institutions," 2:229–667.

*155 Steinmetz, S. R. *Ethnologische Studien zur ersten Entwicklung der Strafe.* Leyden and Leipzig, 1894.
[A great work, corresponding somewhat to Westermarck's *Moral Ideas.*]

*156 STEINMETZ, S. R. "Endo-Kannibalismus," *Anth. Gesellsch. in Wien Mitth.*, 26:1–60.

[The best paper on cannibalism.]

*157 STEINMETZ, S. R. "Suicide among Primitive Peoples," *Am. Anth.*, 7:53–60.

*158 STEINMETZ, S. R. "Continuität oder Lohn und Strafe im Jenseits der Wilden," *Arch. für Anth.*, 24:577–608.

*159 STEINMETZ, S. R. "Eine neue Theorie über die Entstehung des Gottesurteils," *Globus*, 65:105–7.

*160 STEINMETZ, S. R. *Rechtsverhältnisse von eingeborenen Völkern in Afrika und Ozeanien.* Berlin, 1903.

*161 STEINMETZ, S. R. "Der Selbstmord bei den afrikanischen Naturvölkern," *Zeits. f. Socialwiss.*, 10:298–304; 359–75.

161*a* STUART, T. P. "The 'Mika' or 'Kulpi' Operation of the Australian Aboriginals," *Roy. Soc. of N. S. Wales, Jour.*, 30:115–24.

*162 SUMNER, W. G. *Folkways.* Boston, 1907.

["A study of the sociological importance of usages, manner, customs, mores and morals." Contains a wonderful amount of ethnological and culture-historical information in 692 pp.]

163 SUTHERLAND, A. *The Origin and Growth of the Moral Instinct.* London, 1898.

*163*a* SUYEMATSU, K. "The Ethics of Japan," *Smiths. Inst., Rep.* for 1905: 293–307 (reprinted from *Jour. of the Soc. of Arts*, 53).

164 SWANTON, J. R. "The Development of the Clan System and of Secret Societies among the Northwestern Tribes," *Am. Anth.*, N. S., 6:477–85.

*165 SWANTON, J. R. "The Social Organisation of American Tribes," *Am. Anth.*, N. S., 7:663–73.

166 TARDE, G. *Les transformations du pouvoir.* Paris, 1899. (Also, opening chapters, *Rev. internat. de sociol.*, 7:177–92.)

167 THOMAS, W. I. *Sex and Society*, "Sex and Primitive Morality," 149–74.

*167*a* TOUT, C. HILL-. "Totemism: A Consideration of Its Origin and Import," *Roy. Soc. of Canada, Proc. and Trans.*, Ser. 2, 9:61–99.

*167*b* TOUT, C. HILL-. "The Origin of the Totemism of the Aborigines of British Columbia," *Roy. Soc. of Canada, Proc. and Trans.*, 2 Ser. 7:3–15.

58 TUFTS, J. H. "The Individual and His Relation to Society," *Psych. Rev. Mon.*, Sup. 6, No. 2.

169 TYLOR, E. B. "Remarks on Totemism with Especial Reference to Some Modern Theories Respecting It," *Jour. Anth. Inst.*, 28:138–48.

170 UTIESENOVIÉ, O. M. *Die Hauskommunion der Südslaven.* Wien, 1859.

171 VÁMBÉRY, H. *Sittenbilder aus dem Morgenlande.* Berlin, 1877.

172 VEBLEN, T. "The Beginnings of Ownership," *Am. Jour. Sociol.*, 4:352–65.

173 VERNEAU, R. "Les ordalies ou jugements divins," *L'anth.*, 11; 354–56.

*174 VIERKANDT, A. "Die politischen Verhältnisse der Naturvölker," *Zeits. für Socialwiss.*, 4:417–26; 497–510.

*175 VIERKANDT, A. "Die primitive Sittlichkeit der Naturvölker," *Globus*, 76:149–54.

*176 WALLIS, B. "The 'Poro' of the Mendi," *Jour. African Soc.*, 4: 183–89.

*177 WEBSTER, H. *Primitive Secret Societies.* New York, 1908.
[The best English book on the subject.]

178 WELLING, J. C. "The Law of Torture: A Study in the Evolution of Law," *Am. Anth.*, 5:193–215.

*179 WESTERMARCK, E. *The Origin and Development of the Moral Ideas,* "Agents under Intellectual Disability," 1:249–82; "Homicide in General," 1:327–82; "The Killing of Parents, Sick Persons, and Children—Feticide," 1:383–417; "The Killing of Women, and of Adult Slaves," 1:418–33; "Human Sacrifice," 1: 434–76; "The Duel," 1:497–510; "Bodily Injuries," 1:511–25; "Hospitality," 1:570–96; "Slavery," 1:670–716; "Property," 2:1–109; "Suicide," 2:229–64; "Regard for Animals," 2:490–514; "Cannibalism," 2:553–81; "Gods," 2:582–737.
[The most important work on the subject.]

180 WESTERMARCK, E. "L'âr, or the Transference of Conditional Curses in Morocco," in *Anth. Essays Presented to E. B. Tylor.* London, 1907.

*181 WILKIN, A. *Cambridge Anth. Exped. to Torres Straits, Rep.,* "Land Tenure and Inheritance," 5:284–92; "Property and Inheritance," 6: 163–68.

182 WILLOUGHBY, W. C. "Notes of Totemism of the Beewana," *Jour. Anth. Inst.*, 35:295–314.

SUPPLEMENTARY BIBLIOGRAPHIES

SUPPLEMENTARY BIBLIOGRAPHIES

The more important general ethnological works, covering all races, are referred to in the preceding bibliographies, in the Preface, or in Bibliography 14. A few good titles too late for Bibliographies 1–7, or which escaped them, are inserted in Bibliographies 8–13.

A bibliography on the method, problems, and place of anthropology is not included. The following will be sufficient in this connection: BOAS, F., *Anthropology*, N. Y.: Columbia Univ. Press, 1908, 25c; "The History of Anthropology," *Science*, N. S., 20:513–24; FRAZER, J. G., *The Scope of Social Anthropology*, L., 1908, 1s.; HADDON, A. C., "Anthropology, Its Position and Needs," *Jl. Anth. Inst.*, 33:11–23; MCGEE, W. J., "Anthropology," *Science*, N. S., 21:770–84; TOPINARD, P., "Anthropologie, ethnologie et ethnographie," *Soc. d'Anth. Bul.*, 2d sér., 2:199–215; TYLOR, E. B., "On a Method of Investigating the Development of Institutions; Applied to Laws of Marriage and Descent," *Jl. Anth. Inst.*, 18:245–69.

The following are small manuals containing instructions to collectors and travelers: FRAZER, J. G., *Questions on the Customs, Beliefs, and Languages of Savages*, N. Y.: Putnam, 1907, 51 pp., 20c.; KELLER, A. G., *Queries in Ethnography*, N. Y.: Longmans, 1903, ix+77 pp., 50c. These are less technical than the following: *Instructions to Collectors of Historical and Anthropological Specimens*, Washington, 1902, 16 pp. (*National Museum, Bul.* 39, Pt. Q., edited by Holmes, W. H., and Mason, O. T.); *Notes and Queries on Anthropology*, issued by the *Anth. Inst. of Great Britain and Ireland* (3 Hanover Sq., London), edited by Garson and Read, new ed. announced; *Anleitung für ethnographische Beobachtungen und Sammlungen in Afrika und Oceanien*, edited for the K. Mus. für Völkerkunde, by F. von Luschan, Berlin, 1904, 128 pp., containing more than 900 questions.

The best papers on the race question are: BOAS, F., "Human Faculty as Determined by Race," *Am. Assoc. for the Adv. of Sci., Proc.*, 43:301–27, "The Race Problem in America," *Science*, N. S., 29:839–49; and W. H. HOLMES, "Sketch of the Origin, Development, and Probable Destiny of the Races of Men," *Am. Anth.*, N. S., 4:369–91. Robinson's lecture on History is published by the Columbia University Press (1908. Pp. 29. 25c.).

The best information on new literature will be found in the *American Anthropologist* (1333 F St., N. W., Washington, D. C.).

In connection with the following lists the reader will understand that while the reports of modern anthropologists are of much greater value than the observations of the old travelers and missionaries, the latter had the advantage of observing the aborigines before they were disturbed by white influence, and

they frequently recorded conditions which had disappeared before the anthropologist entered the field. At the same time their observations are so inaccurate and so fanciful that the anthropologist is sometimes forced to discredit them entirely. In the paper by Tylor mentioned above there are suggestions on the method of valuing such evidence. Some comments on the inaccuracy of the observations of the old writers will also be found in this volume, p. 474, note, and p. 475. The old books which are starred in the following lists are starred as old books.

The editions cited throughout are not necessarily either the first or the last, but the one to which I had access, though I have usually indicated the date of issue of very old books.

Asia and Europe are historical rather than ethnological countries, and do not fall entirely within the scope of this book. The bibliography of Asia and Japan is limited in the main to the non-civilized tribes or early times. The bibliography of Europe contains a limited number of titles on ethnology and prehistoric archaeology.

BIBLIOGRAPHY 8

NORTH AND SOUTH AMERICA

*1 ADAIR, J. *History of the American Indians.* L., 1775.
[Important for the southeastern tribes, notwithstanding his theory that the Indian is of Jewish origin.]

2 ALLEN, H. A. "Atnatanas, Natives of Copper River, Alaska," *Smiths. Inst., Rep.* for 1886:258–166.

3 ATWATER, C. *Indians of the Northwest.* Columbus, 1850.

4 BAEGERT, J. "The Inhabitants of the California Peninsula (1773)," *Smiths. Inst., Rep.* for 1863:352–69.

5 BALDWIN, J. D. *Ancient America.* N. Y., 1871.

6 BANCROFT, N. H. *Native Races of the Pacific States.* S. F., 1890.
[A compilation of much miscellaneous and often contradictory information, but important.]

7 BANCROFT, N. H. *Alaska.* S. F., 1886. (*Works*, 33.)

*8 BANDELIER, A. F. "Final Report of Investigations among the Indians of the Southwestern United States," *Arch. Inst. of Am. Papers*, Am. Ser., 3:1–319; 4:1–591.

*9 BANDELIER, A. F. "Outline of Documentary History of the Zuñi Tribe," *Jl. Am. Ethn. and Arch.*, 3:1–144.

10 BARTRAM, W. *Travels through N. and S. Carolina.* . . . . Ph., 1791.
On the Cherokees, Creeks, Choctaws. [The American Ethnological Society has reprinted in facsimile (1909) Vol. 3 of its Transactions, containing Bartram's paper, "Observations on the Creek and Cherokee Indians," with notes by E. G. Squier. The bulk of the original edition of this volume was destroyed by fire.]

11 BATES, H. W. *A Naturalist on the River Amazon.* L., 1863.

12 BEAUCHAMP, W. M. "A History of the New York Iroquois," *N. Y. State Mus., Bul.*, 78:1–461.

13 BEAUCHAMP, W. M. "Onondaga Customs," *Jl. Am. Folk-Lore*, 1:195–203.

*14 BECKWITH, H. W. *The Illinois and Indiana Indians.* C., 1884.

15 BECKWITH, P. "Notes on Customs of the Dakotahs," *Smiths. Inst. Rep.* for 1886:245–57.

16 BIART, L. *The Aztecs.* (Tr. Garner.) C., 1887.

17 BLOOMFIELD, J. K. *The Oneidas.* N. Y., 1907.

*18 BOAS, F. "The Central Eskimo," *Bur. Am. Ethn., Rep.*, 6:399–669.
[One of Boas' earlier but distinguished papers.]

*19 BOAS, F. "The Eskimo of Baffin Land and Hudson Bay," *Am. Mus. Nat. Hist., Bul.*, 15:4–570.
[Pp. 163–332 and 483–570 are on myth, traditions, custom.]

*20 BOAS, F. "First General Report on the Indians of British Columbia," *Brit. Assoc. Adv. Sci., Rep.*, 59:801–93; "Second Rep.," *ibid.*, 60:562–715; "Third Rep.," *ibid.*, 61:408–47; ["Fourth Rep."] (Indian Tribes of the Lower Fraser River), *ibid.*, 64:454–63; "Fifth Rep.," *ibid.*, 65:523–92.
[Of great importance.]

*21 BOAS, F. *The Half-blood Indian; an Anthropometric Study.* N. Y., 1894. (Reprint from *Pop. Sci. Monthly*, 45:761–70.)

22 BOAS, F. "The Anthropology of the North American Indian," *Internat. Cong. of Anth., Mem.*, 37–49.

23 BOAS, F. "Physical Characteristics of the Indians of the North Pacific Coast," *Am. Anth.*, 4:25–32.

*23a BOAS, F. "Songs and Dances of the Kwakiutl," *Jl. Am. Folk-Lore*, 1:49–64.

24 BOMAN, E. *Antiquités de la région Andine de la république Argentine et du désert d'Atacama (Mission scientifique G. de Créqui Montfort et E. Sénéchal de la Grange).* P. 1908.
[Archaeological. Vol. 2, announced, will contain in part ethnological material.]

*24a BRETT, W. H. *The Indian Tribes of Guiana.* L., 1868.

25 BRINTON, D. G. *The American Race.* Ph., 1901.

26 BRINTON, D. G. *Essays of an Americanist.* Ph., 1891.

*27 BRÜHL, G. *Die Culturvölker Alt-Amerikas.* N. Y., 1887.
[Contains bibligraphy of Mexico, Peru, etc.]

*28 CARVER, J. *Travels through the Interior Parts of North America.* Ph., 1789.

*29 CATLIN, G. *Manners, Customs, and Condition of the North American Indians.* N. Y., 1841.
[An important source. Numerous editions.]

31 CATLIN, G. *Last Rambles among the Indians of the Rocky Mountains and the Andes.* N. Y., 1867.

*32 CHAMBERLAIN, A. F. "Report on the Kootenay Indians of South-Eastern British Columbia," *Brit. Assoc. Adv. Sci., Rep.*, 62:549–614.

33 CHAMBERLAIN, A. F. "The Kootenay Indians," *Ann. Arch. Rep., 1905, App. Rep. of Minister of Education of Ontario*, 178–87.

34 CHAMBERLAIN, A. F. "Algonquian Words in American English," *Jl. Am. Folk-Lore*, 15:240–67.

35 CHAMPLAIN, S. DE. *Les voyages de la Nouvelle France occidentale.* P., 1632.

*36 CHARLEVOIX, P. F. X. *Histoire et description générale de la nouvelle France.* P., 1774.

37 CHARNAY, D. *Ancient Cities of the New World.* N. Y., 1888.

38 CHRISTIAN, D. "Guachos of San Gorge," *Jl. Anth. Inst.*, 11:34–52.

39 CLAVIGERO, F. *The History of Mexico.* (Tr. Cullen.) L., 1787.
*40 COLDEN, C. *History of the Five Indian Nations.* L., 1727.
41 CONNELLY, W. E. "The Wyandots," *Ann. Arch. Rep., 1899, App. Rep. of the Minister of Education of Ontario,* 92–123.
*42 COPWAY, G. *Traditional History of the Ojibway Nation.* Bost., 1851.
*43 CRANZ, D. *The History of Greenland.* (Tr.) L., 1820.
*44 CUSHING, F. H. "My Adventures in Zuñi," *Century Mag.,* 25:191–207, 500–511; 26:28–47.
*45 CUSICK, D. *Sketches of Ancient History of the Six Nations.* N. Y., 1828.
*46 DALL, W. H. "Tribes of the Extreme Northwest," *U. S. Geog. and Geol. Sur.: Cont. to N. Am. Ethn.,* 1:7–361.
*47 DALL, W. H. *Alaska and Its Resources.* Bost., 1870.
48 DALL, W. H. "Distribution of the Native Tribes of Alaska and Adjacent Territory," *Am. Acad. Adv. Sci., Proc.,* 18:263–73.
*49 DIXON, R. B. "The Northern Maidu," *Am. Mus. of Nat. Hist., Bul.,* 17:119–346.
*50 DIXON, R. B. "The Shasta," *Am. Mus. of Nat. Hist., Bul.,* 17:381–498.
*51 DOBRIZHOFFER, M. *Account of the Abipones.* (Tr.) L., 1822.
52 DODGE, R. I. *Our Wild Indians.* Hartford, 1882.
53 DODGE, R. I. *The Plains of the Great West.* N. Y., 1877.
54 DONALDSON, T. "Moqui Pueblo Indians of Arizona," *11th. U. S. Census, Extra Bul.,* 1–136.
*55 DORSEY, J. O. "Omaha Sociology," *Bur. Ethn., Rep.,* 3:211–370.
[This and the following are distinguished papers.]
*56 DORSEY, J. O. "Siouan Sociology," *Bur. Ethn., Rep.,* 15:213–44.
57 DOUGLAS, J. "The Consolidation of the Iroquois Confederacy," *Am. Geog. Soc., Jl.,* 29:41–54.
58 DRAKE, S. G. *Aboriginal Races of N. America.* N. Y., 1880.
59 DUNBAR, J. B. "The Pawnee Indians," *Mag. of Am. Hist.,* 4:241–81.
*60 EELS, M. "The Twana, Chemakum, and Klallam Indians of Washington Territory," *Smiths. Inst., Rep.* for 1887:605–81.
*61 EHRENREICH, P. *Beiträge zur Völkerkunde Brasiliens.* B., 1891.
*62 EHRENREICH, P. "Die Ethnographie Südamerikas . . . . ," *Arch. f. Anth.,* 31:41–73.
63 EHRENREICH, P. *Anthropologische Studien über die Urbewohner Brasiliens.* Brauns., 1897.
[Physical anthropology, but the introduction of 44 pages on the ethnological standpoint is excellent.]
64 FÁBREGA, H. P. DE. "Ethnographic and Linguistic Notes on the Paez Indians," *Am. Anth. Assoc., Mem.,* 1:301–56.
*65 FARRAND, L. *Basis of American History, 1500–1900* (Vol. II of Hart, *The American Nation*). N. Y., 1906.
[The best general treatment of the Indian. Provided with a critical bibliography.]
66 FARRAND, L. "Notes on the Alsea Indians of Oregon," *Am. Anth.,* N. S., 3:239–47.
*67 FEWKES, J. W. "Aborigines of Porto Rico . . . . ," *Bur. Ethn., Rep.,* 25:17–284.

*68 Frič, V., and Radin, P. "Contributions to the Study of the Bororo Indians," *Jl. Anth. Inst.*, 36:382–406.

*69 Gamboa, S. de. *Geschichte des Inkareiches.* B., 1906 [in progress].

70 Garcilasso de la Vega. *Royal Commentaries of the Yncas.* (*Hakluyt Society*, 41, 45.) L., 1871 [orig. 1617].

71 Garson, J. G. "On the Inhabitants of Tierra del Fuego," *Jl. Anth. Inst.*, 15:144–57.

*72 Gatschet, A. S. "Klamath Indians of Southwestern Oregon," *U. S. Geog. and Geol. Sur.: Contrib. to N. Am. Ethn.*, 2, Pt. 1:1–711; Pt. 2:1–711.

*73 Gibbs, G. "Tribes of Western Washington and Northwestern Oregon," *U. S. Geog. and Geol. Sur.: Contrib. to N. Am. Ethn.*, 1:1–361.

73*a* Gibbs, G. "Report on the Indian Tribes of the Territory of Washington," *Pacific Railroad Reports*, 1:402–36.

74 Goddard, P. E. "Life and Culture of the Hupa," *Univ. of Calif. Pub. in Am. Arch. and Ethn.*, 1:1–88.

*75 Goeje, C. H. de. "Beiträge zur Völkerkunde von Surinam," *Internat. Arch. f. Ethn.*, 19:1–27.

*76 Grinnell, G. B. *The Story of the Indian.* N. Y., 1896.
[A good popular account.]

77 Hale, H. *Ethnography and Philology.* (*U. S. Exploring Expedition*, 6.) Wash., 1846.

78 Hall, C. F. *Arctic Researches and Life among the Esquimaux.* N. Y., 1865.

79 Hardisty, W. L. "The Loucheux Indians," *Smiths. Inst., Rep.* for 1866: 311–20.

*80 Hawtrey, S. H. C. "The Lengua Indians of the Paraguayan Chaco," *Jl. Anth. Inst.*, 31:280–99.

*81 Hearne, S. *Journey from Prince of Wales Fort in Hudson Bay to the Northern Ocean.* L., 1795.

*82 Heckewelder, J. *History, Manners, and Customs of the Indian Nations* (*Pa. Hist. Soc., Mem.*, 12). Ph., 1876 [orig. 1818].

83 Hennepin, L. *Description of Louisiana.* (Tr.) N. Y., 1880 [orig. 1684].

84 Hennepin, L. *Voyage Curieux.* La Haye, 1704.

85 Heriot, G. *Travels through the Canadas.* L., 1807.

*86 Hodge, F. W. (ed.). "Handbook of American Indians," *Bur. Ethn., Bul.*, 30. 2 v.
[Valuable cyclopaedia covering all aspects of Indian life.

*87 Hodge, F. W. "The Early Navajo and Apache," *Am. Anth.*, 8:223–40.

*88 Hoffmann, W. J. "The Menomini Indians," *Bur. Ethn., Rep.*, 14:3–328.

89 Holmes, W. H. "Anthropological Studies in California," *U. S. Nat. Mus., Rep.* for 1900:155–87.

90 Hrdlicka, A. "Notes on the Indians of Sonora, Mexico," *Am. Anth.*, N. S., 6:51–89.

91 Humboldt, A. v. *Personal Narrative of Travels to the Equinoctial Regions of America* (1799–1804; tr.). L., 1894.

*92 Hunter, J. *Manners and Customs of Several Indian Tribes. . . . .* Ph., 1822.

*93 HYADES, P., ET DENIKER, J. *Mission scientifique du Cap Horn* Vol. 7: "Anthropologie, Ethnographie." P., 1891.
[Largely physical anthropology, but some important ethnology.]

*94 JAMES, E. *Expedition from Pittsburg to the Rocky Mountains.* Ph., 1823.

*94a JOEST, W. "Ethnographisches und Vierwandtes aus Guayana," *Internat. Arch. f. Ethnog.*, 5:*Sup.* 1–102.
[Especially rich in materials on ornament.]

95 JONES, P. *Hist. of the Ojibway Indians.* L., 1861.

*96 JONES, W. "Central Algonkin," *Ann. Arch. Rep., 1905, App. Rep. of Minister of Education of Ontario,* 136–46.

*97 KEANE, A. H. *Ethnology,* "Homo Americanus," 334–73.
[Keane has indications of the relation of the Indian to the other races, but his views are not to be regarded as authoritative.]

*98 KEANE, A.H. *Man Past and Present,* "The American Aborigines," 349–440.

99 KEANE, A. H. "On the Botocudos," *Jl. Anth. Inst.*, 13:199–213.

100 KELLY, F. *Narrative of My Captivity among the Sioux.* Hartford, 1872.

101 KERSTEN, L. "Die Indianerstämme des Gran Chaco . . . . ," *Internat. Arch. f. Ethn.*, 17:1–75.

102 KOENIGSWALD, G. v. "Die Cayuás," *Globus,* 93:376–81.

103 KOENIGSWALD, G. v. "Die Corôados im südlichen Brasilien," *Globus* 94:27–32, 45–49.

104 KOENIGSWALD, G. v. "Die Carajá Indianer," *Globus,* 94:217–23, 232–38.

*105 KRAUSE, A. *Die Tlinkit-Indianer.* Jena, 1885.

*106 KROEBER, A.L. ""Ethnography of the Cahuilla Indians," *Univ. of Cal. Pub. in Am. Arch. and Ethn.*, 8:29–68.

107 KROEBER, A.L. "A Mission Record of the California Indians, from a Manuscript in the Bancroft Library," *Univ. of Cal. Pub. in Am. Arch. and Ethn.*, 8:1–27.

*108 KROEBER, A.L. "Types of Indian Culture in California," *Univ. of Cal. Pub. in Am. Arch. and Ethn.*, 2:81–103.

*109 KROEBER, A.L. "Ethnology of the Gros Ventre," *Am. Mus. Nat. Hist., Anth. Pap.*, 1, Pt. 4:141–282.

110 LAHONTAN, L. A. DE. *New Voyages to N. America* (ed. Thwaites). C., 1905 [orig. 1703].

111 LE MOYNE, M. J. DE. *Narrative of LeMoyne, an Artist who accompanied the French Expedition to Florida under Laudonnière, 1564.* (Tr. T. de Bry.) Bost., 1875.

*112 LEWIS, A.B. "Tribes of the Columbia Valley and the Coast of Washington and Oregon," *Am. Anth. Assoc., Mem.*, 1:151–209.
[A good general statement, with a bibliography of this region.]

*113 LEWIS, M., AND CLARKE, W. *Travels to the Source of the Missouri River, ...* C., 1902 [orig. 1814].
[The original journals of L. and C. (ed. Thwaites) were published in N.Y., 1904.]

114 LOWRIE, R. H. "The Northern Shoshone," *Am. Mus. Nat. Hist., Anth. Pap.*, 2, Pt. 2:163–306.

115 LUMHOLTZ, C. *Unknown Mexico.* L., 1903.

116 MacCauley, C. "The Seminole Indians of Florida," *Bur. Ethn., Rep.*, 5:469–531.

*117 McGee, W. J. "The Seri Indians," *Bur. Ethn., Rep.*, 17:1–128, 129–344.

*118 McGee, W. J. "The Siouan Indians, " *Bur. Ethn., Rep.*, 15:157–204.

119 McKenney, T. L. *Sketches of a Tour of the Lakes.* Baltimore, 1827.

*120 McKenney, T. L., and Hall, J. *History of the Indian Tribes of North America.* Ph., 1850.

121 Mackenzie, A. *Voyages from Montreal. . . . .* L., 1801.

*122 McLean, J. *The Indians of Canada.* L., 1892.

123 MacLean, J. *Canadian Savage Folk.* Toronto, 1896.

*124 Martius, K. F. P. v. *Beiträge zur Ethnographie und Sprachenkund Amerikas, zumal Brasiliens.* Lpz., 1867.

125 *Massachusetts Historical Society, Collections.* Bost., 1792 ff., *passim.*

126 Matthews, W. "Ethnography and Philology of the Hidatsa," *U.S. Geog. and Geol. Sur. of the Territories: Miscel. Pub.*, 7:1–239.

127 Matthews, W. "The Catlin Collection of Indian Paintings," *U.S. Nat. Mus.*, Rep. for 1890:593–610.

*128 Mayne, R. C. *Four Years in British Columbia and Vancouver Island.* L., 1862.

129 Mooney, J. "Calendar History of the Kiowa Indians," *Bur. Ethn., Rep.*, 17:129–445.

*130 Mooney, J. "The Cheyenne Indians," *Am. Anth. Assoc., Mem.*, 1:357–442.

*131 Morgan, L. H. *Ancient Society.* N.Y., 1877.

[Morgan's work remains the most important on the Iroquois.]

*132 Morgan, L. H. "Houses and House-Life of the American Aborigines," *U. S. Geog. and Geol. Sur.: Contrib. to N. Am. Ethn.*, 4:1–276.

*133 Morgan, L. H. *League of the Ho-de'-no-sau-nee, or Iroquois.* Rochester, N.Y., 1904.

134 Morice, A. G. "Nah-ane and their Language," *Can. Inst., Trans.*, 7:517–34.

*135 Morice, A. G. "The Canadian Dénés," *Ann. Arch. Rep., 1905, App. Rep. of Minister of Education of Ontario*, 187–219.

[Contains references to his own lengthier and important papers. Father Morice has also a popular but important account of "The Great Déné Race" in vols. 1. and 2 of *Anthropos*, in English.]

*136 Murdoch, J. "Ethnological Results of the Point Barrow Expedition," *Bur. Ethn., Rep.*, 9:3–441.

137 Musters, Lt. "On the Races of Patagonia," *Jl. Anth. Inst.*, 1:193–206.

138 Nansen, F. *Eskimo Life.* (Tr.) L., 1893.

*139 Nelson, E. W. "The Eskimo about Bering Strait," *Bur. Ethn., Rep.*, 18:3–518.

[A great work.]

*140 Niblach, A. P. "The Coast Indians," *U.S. Nat. Mus., Rep.* for 1898:225–386.

141 Nicholas, F. C. "The Aborigines of the Province of Santa Marta, Colombia," *Am. Anth.*, N.S., 3:606-49.

*142 NORDENSKIÖLD, E. "Beiträge zur Kenntniss einiger Indianerstämme des Rio Madre de Dios-Gebietes," *Ymer*, 1905:265–312.

*142a PARKER, A. C. "Secret Medicine Societies of the Seneca," *Am. Anth.*, N.S., 11:161–85.

*143 PAYNE, E. J. *History of the New World Called America.* Oxf., 1899.

*144 PETITOT, E. *Ethnographie des Américains hyperboréens.* P., 1878.

*145 PETITOT, E. *Monographie des Dènè-Dindjié.* P., 1875.

146 PETITOT, E. *L'origine asiatique des Esquimaux.* Rouen, 1890.

*147 POWERS, S. "The Tribes of California," *U.S. Geog. and Geol. Sur.: Contrib. to N. Am. Ethn.*, 3:1–635.

[Of first importance for this region.]

148 QUATREFAGES DE BREAU, A. J. L. "The Advent of Man in America," *Smiths. Inst., Rep.* for 1892:513–20.

*149 RASMUSSEN, K. *The People of the Polar North.* L., 1908.

*150 RATZEL, F. *History of Mankind*, 2:1–203.

151 RIGGS, S. O. "Dakota Ethnography," *U.S. Geog. and Geol. Sur.: Contrib. to N. Am. Ethn.*, 9:155–232.

*152 RINK, H. J. *Eskimo Tribes.* L., 1891.

*153 RIVET, DR. *Les Indiens Jibaros.* P., 1908.

[Also in *L'anthropologie*, Vols. 18 and 19.]

154 ROTH, H. L. "The Aborigines of Hispaniola," *Jl. Anth. Inst.*, 16:247–86.

*155 ROYCE, C. A. "The Cherokee Nation of Indians," *Bur. Ethn., Rep.*, 5:121–378.

156 ROYCE, C. C. "Indian Land Cessions in the U.S.," *Bur. Ethn., Rep.*, 18:521–964.

*157 RUSSELL, F. "The Pima Indians," *Bur. Ethn., Rep.*, 26:17–389.

*158 SAGARD, T. G. *Le grand voyage du pays des Hurons.* P., 1632.

159 SCHMIDT, E. *Die Vorgeschichte Nordamerikas.* Brauns., 1894.

*160 SCHMIDT, M. *Indianerstudien in Zentralbrasilien.* B., 1905.

[Valuable suggestions on textiles and the theory of ornament. S. has also a paper, "Altperuanische Ornamentik," *Arch. f. Anth.*, 35:22–36.]

161 SCHOMBURGK, R. H. *Reisen in Britisch-Guiana.* Lpz., 1848.

162 SCHOMBURGK, R. H. "Journal of an Expedition from Pirara to the Upper Corentyne," *Jl. Roy. Geog. Soc.*, 15:1–104.

163 SCHOMBURGK, R. H. "On the Natives of Guiana," *Jl. Ethn. Soc.*, 1:253–76.

*164 SCHOOLCRAFT, H. R. *History, Condition, and Prospects of the Indian Tribes of the United States.* Ph., 1857.

[One of the most important sources. 6 vols. Rare. A 2-vol. abridgment was issued (Ph., 1884) with the title, *The Indian Tribes of the United States.*]

*165 SCHOOLCRAFT, H. R. *The American Indians: Their History, Condition and Prospects.* Rochester, 1851.

[Originally issued (1844–45) in 8 nos., in paper covers, with the title, *Oneota, or Characteristics of the Red Race of America*, and afterward reprinted with various titles.]

*168 SIEMIRADZKI, J. VON. "Beiträge zur Ethnographie der südamerikanischen Indianer," *Anth. Gesellsch. in Wien. Mitth.*, 28:127–70.

*169 SMET, P. J. *Life, Letters and Travels of Father Pierre Jean de Smet 1801–1873.* (Ed. Chittenden and Richardson.) N.Y., 1905. 4 vols.

*170 SMITH, J. *General History of Virginia.* L. 1624; Glasgow, 1907. (In PINKERTON, *Voyages*, 13.)

170a SPECK, F. G. "Ethnology of the Yuchi Indians" [a Ph.D. dissertation]. Ph., 1909 (*Anth. Pub. of the Univ. of Pa. Mus.*, 1:1–154).

171 SPENCER, H. *Descriptive Sociology*, 2: *Mexicans, Central Americans, Chibcas and Peruvians;* 6: *American Races.*

[This is a collection of materials prepared by others for Spencer from which he wrote his *Principles of Sociology*. The work consists of excerpts from many (mainly) old writers, often very brief.]

172 SPINDEN, J. "The Nez Percé Indians," *Am. Anth. Assoc., Mem.*, 2:165–274.

*173 SPIX, J. B. v., AND MARTIUS, C. F. P. v. *Travels in Brazil in the Years 1817–20.* (Tr.) L., 1824.

174 SQUIER, E. G. *Nicaragua.* N.Y., 1852.

175 SQUIER, E. G. *Peru.* N.Y., 1877.

176 STEERÈ, J. B. "Indian Tribes of the Purus River, Brazil," *U.S. Nat. Mus., Rep.* for 1901:359–93.

*177 STEINEN, K. VON DEN. *Unter den Naturvölkern Zentral-Brasiliens.* B., 1894.

[A justly famous work, the best on South America.]

*178 STEINEN, K. VON DEN. *Durch Central-Brasilien.* Lpz., 1886.

179 STEPHEN, A. M. "The Navajo," *Am. Anth.*, 6:345–62.

180 STEPHENS, J. L. *Incidents of Travel in Central America.* N.Y., 1841.

181 STEVENS, F. E. *The Black Hawk War.* C., 1903.

*182 STOLL, O. "Die Ethnologie der Indianerstämme von Guatemala," *Internat. Arch. f. Ethnog.*, 1:*Sup.* 1–112.

*183 SWAN, J. G. "The Indians of Cape Flattery," *Smiths. Inst. Contr. to Knowledge*, 16, Art. 7:1–106.

184 SWAN, J. G. "The Haidah Indians of Queen Charlotte Islands," *Smiths. Inst. Contr. to Knowl.*, 21, Art. 4:1–22.

*185 SWANTON, J. R. "The Haida of Queen Charlotte Islands," *Am. Mus. of Nat. Hist., Mem.*, 8:9–295.

186 SWANTON, J. R. "Tlingit Indians," *Bur. Ethn., Rep.*, 26:395–512.

*187 TEIT, J. "Lillooet Indians," *Am. Mus. Nat. Hist., Mem.*, 4:193–301.

*188 TEIT, J. "The Shuswap," *Am. Mus. Nat. Hist., Mem.*, 4:443–789.

*189 TEIT, J. "The Thompson Indians of British Columbia," *Am Mus. Nat. Hist., Mem.*, 2:163–392.

[One of the best studies.]

190 THOMAS, C. *The Cherokees in Pre-Columbian Times.* N.Y., 1890.

*191 THURN, F. IM. *Among the Indians of Guiana.* L., 1883.

192 THWAITES, R. G. (editor). *Jesuit Relations and Allied Documents: Travels and Explorations of the Jesuit Missionaries in New France, 1610–1791.* Cleveland, 1901.

[This monumental work of 73 vols. is important though tedious, and mainly concerned with the missionary labors of the Jesuit Fathers. See MCGUIRE, J. D., "Ethnology in the Jesuit Relations," *Am. Anth.*, N.S., 3:557–69.]

193 THWAITES, R. G. *Early Western Travels, 1748–1846.* Cleveland, 1907. 32 vols.

*194 TOUT, C. HILL-. "Ethnological Report of the Stseēlis and Sk-aūlits Tribes of the Halōkmēlem Division of the Salish of British Columbia," *Jl. Anth. Inst.*, 34:311–76.

[Hill-Tout's work is important for Canada.]

*195 TOUT, C. HILL-. "Report on the Ethnology of the Stlatlumh of British Columbia," *Jl. Anth. Inst.*, 35:126–218.

*196 TOUT, C. HILL-. "Report on the Ethnology of the South-Eastern Tribes of Vancouver Island," *Jl. Anth. Inst.*, 37:306–74.

197 TOUT, E. HILL-. "Oceanic Origin of the Kwakiutl-Nootka and Salish Stocks of British Columbia," . . . . *Roy. Soc. Canada, Trans. 2d ser.*, 4, sec., 2:187–231.

*198 TOUT, C. HILL-. *British North America: The Far West, the Home of the Salish and Dênê.* L., 1907.

[Good but more popular.]

*199 TOUT, C. HILL-. *The Native Races of the British Empire.* Toronto, 1907.

200 TURNER, L. M. "Ethnology of the Ungava District, Hudson Bay Territory," *Bur. Ethn., Rep.*, 11:159–350.

*201 TYLOR, E. B. *Anahuac, or Mexico and the Mexicans.* L., 1861.

*202 WAITZ, T. *Anthropologie der Naturvölker*, 3:1–548; 4:1–502.

[Remains important. Waitz makes use of many of the old writers.]

*203 WALLACE, A. R. *Travels on the Amazon and Rio Negro.* L., 1853.

*204 WARREN, W. W. "History of the Ojibways," *Minnesota Hist. Soc. Collections*, 5:21–394.

205 WHITE, R. B. "Notes on the Aboriginal Races of the N. W. Provinces of S. America," *Jl. Anth. Inst.*, 13:240–57.

*206 WIED, M. ZU. *Travels in the Interior of N. America.* (Tr.) L., 1843.

207 WILKES, C. *Narrative of the United States Exploring Expedition.* Ph., 1845. 5 v.

208 WILL, G. F., AND SPINDEN, H. J. "The Mandans," *Peabody Mus. Am. Arch. and Ethn., Pap.*, 3:79–219.

209 WILLOUGHBY, C. "Indians of the Quinaielt Agency, Washington Territory," *Smiths. Inst., Rep.* for 1886:267–82.

210 WINSHIP, G. P. "The Coronado Expedition, 1540–1542," *Bur. Ethn., Rep.*, 14:339–613.

*211 WINSOR, J. *Narrative and Critical History of America.* Bost. [especially vol. I], 1889.

*212 WISSLER, C. "The Blackfoot Indians," *Ann. Arch. Rep. 1905, App. Rep. of Minister of Education of Ontario*, 162–78.

212*a* WISSLER, C., editor. "The Indians of Greater New York and the Lower Hudson," *Am. Mus. Nat. Hist., Anth. Pap.*, 3:1–242.

[Six archaeological and 3 ethnological papers by different hands.]

213 ZEISBERGER, D. *Diary 1781–98* (ed. Bliss). Cincin., 1885.

Very wild views have been popularly promulgated on the question of the antiquity of man in America. The student may first read FARRAND, *The Basis of American History*, chap. 5: "Antiquity of Man in North America,

and the following papers by HOLMES: "Auriferous Gravel Man in California," *Am. Anth.*, N. S., 1:107–21, 614–45; "Are There Traces of Glacial Man in the Trenton Gravels?" *Jl. of Geol.*, 1:15–37; "Traces of Glacial Man in Ohio," *Jl. of Geol.*, 1:147–63; "A Sketch of the Great Serpent Mound," *Science*, 8:624–28. Other good papers by HOLMES are: "Stone Implements of the Tidewater Province," *Bur. Ethn., Rep.*, 15:13–152; "Fossil Human Remains in Kansas," *Am. Anth.*, N. S., 4:743–52. A recent paper is MONTGOMERY, "Remains of Prehistoric Man in the Dakotas," *Am. Anth.*, N. S., 8:640–51. HAYNES has a paper on "Prehistoric Archaeology of N. America" in Winsor's *Narr. and Crit. Hist.*, 1:328–68, and WINSOR has a paper on "Progress of Opinion Respecting the Origin and Antiquity of Man in America" in the same work, 1:369–412. The best book is perhaps THOMAS, C., *Introduction to the Study of N. American Archaeology* (Cincin., 1898). FOWKE, G., *Archaeological History of Ohio: The Mound Builders and Later Indians* (Columbus, 1902), is good. Also MOOREHEAD, W. K., *Prehistoric Implements* (Cincin., 1900), and THURSTON, G. P., *Antiquities of Tennessee* (Cincin., 1890). NADAILLAC, *Prehistoric America* (N. Y., 1893) is a good popular work. A valuable book is SELER, E. (and others), "Mexican and Central American Antiquities, Calendar and History," *Bur. Ethn., Bul.*, 28:1–670. Seler is pre-eminent in this field and his important work will be found in his *Gesammelte Abhandlungen zur Sprach- und Alterthumskunde* (Berlin, 1902–1909). Other references will be found in Bibliographies 3 and 5.

BIBLIOGRAPHY 9

AFRICA

1 AIMES, H. H. S. "African Institutions in America," *Jl. Am. Folk-Lore*, 18:15–32.

2 ALLEN, W., AND THOMSON, T. R. H. *A Narrative of the Expedition . . . to the River Niger in 1841.* L., 1848.

*3 ANKERMANN, B. "L'ethnographie actuelle de l'Afrique méridionale," *Anthropos*, 1:914–49.

*4 ANKERMANN, B. "Kulturkreise und Kulturschichten in Afrika," *Zeits. f. Ethn.*, 37:54–84.

[A systematic study of Africa may begin with this.]

*5 ANKERMANN, B. "Ueber den gegenwärtigen Stand der Ethnographie der Südhälfte Afrikas," *Arch. f. Anth.*, 32:241–86.

*6 ARBOUSSET, T., AND DAUMAS, F. *Narrative of an Exploratory Tour to the N. E. of the Colony of the Cape of Good Hope.* (Tr.) L., 1852.

7 ARNOT, F. *Garenganze; or, Seven Years' Pioneer Mission Work in Central Africa.* L., 1889.

8 ARNOT, F. S. "Journey from Natal to Bihé and Benguela and . . . . to the Sources of the Zambesi and the Congo," *Roy. Geog. Soc., Proc.*, 1889:65–82.

9 BAKER, S. W. *The Albert Nyanza.* N. Y., 1868.

10 BAKER, S. W. *Ismailia.* L., 1886.
*11 BARTH, H. *Travels and Discoveries in North and Central Africa.* (Tr.) L., 1859.
12 BARTHEL, K. "Völkerbewegungen auf der Südhälfte des africanischen Kontinents," *Verein f. Erdkunde zu Leipzig, Mitth.*, 1893:5–87.
13 BASTIAN, A. *Afrikanische Reisen.* Bremen, 1859.
14 BASTIAN, A. *Die deutsche Expedition an der Loango-Küste.* Jena, 1875.
15 BAUMANN, O. "Beiträge zur Ethnographie des Kongo," *Anth. Gesell. zu Wien., Mitth.*, 17:160–80.
16 BAUMANN, O. *Durch Massailand zur Nilquelle.* B., 1894.
17 BEECHAM, J. *Ashantee and the Gold Coast.* L., 1841.
18 BÉGUIN, E. *Les ma-Rotsé. Étude géogr. et ethnogr. du Haut-Zambèze.* Lausanne, 1903.
*19 BENNETT, A. L. "Ethnographical Notes on the Fang.," *Jl. Anth. Inst.*, 29:66–98.
20 BENTLEY, W. H. *Pioneering on the Congo.* L., 1900.
*20a BINGER, CAPT. *Du Niger au golfe de Guinée par le pays de Kong et le Mossi.* P., 1892.
21 BOUCHE, P. B. *Sept ans en Afrique occidentale. La Côte des esclaves et le Dahomey.* P., 1885.
*22 BRUCE, J. *Travels to Discover the Source of the Nile.* Edin., 1790.
*23 BRUN, P. "Notes sur les croyances et les pratiques religieuses des Malinkés fétichistes," *Anthropos*, 2:722–29, 942–54.
24 BURDON, J. A. "The Fulani Emirates of Northern Nigeria," *Geog. Jl.*, 24: 636–51.
25 BURROWS, G. *The Land of the Pygmies.* L., 1898.
*26 BURROWS, G. "On the Natives of the Upper Welle District of the Belgian Congo," *Jl. Anth. Inst.*, 28:35–47.
27 BURTON, R. F. *Abeokuta and the Camaroons Mountains.* L., 1863.
28 BURTON, R. F. *First Footsteps in East Africa.* L., 1856.
29 BURTON, R. F. *The Lake Regions of Central Africa.* L., 1860.
*30 BURTON, R. F. *A Mission to Gelele, King of Dahome.* L., 1864.
31 BURTON, R. F. *Two Trips to Gorilla Land.* L., 1876.
32 BUSCHAN, G. "Zur Pathologie der Neger," *Archivio per l'Anth. e l'Ethn.*, 31:357–75.
[Contains a bibliography on diseases of the negro.]
33 CAILLIÉ, R. *Travels through Central Africa to Timbuctoo.* L., 1830.
*34 CAMERON, V. L. *Across Africa.* L., 1885.
*35 CASATI, G. *Ten Years in Equatoria.* (Tr.) L., 1891.
36 CHAPAUX, A. *Le Congo.* Br., 1894.
*37 CHATELAIN, H. "African Folk-Life," *Jl. Am. Folk-Lore*, 10:21–34.
38 CHATELAIN, H. "Some Causes of the Retardation of African Progress," *Jl. Am. Folk-Lore*, 8:177–84.
39 CLOZEL, F. J. *Les Bayas: notes ethnographiques et linquistiques.* . . . . P. 1896.
*40 CLOZEL, F. J., ET VILLAMUR, R. *Les coutumes indigènes de la Côte d'Ivoire* P., 1902.

*41 CONDER, C. R. "The Present Condition of the Native Tribes of Bechuanaland," *Jl. Anth. Inst.*, 16:76–92.

*42 CONNOLLY, R. M. "Social Life in Fanti-Land, "*Jl. Anth. Inst.*, 26:128–53

43 COQUILHAT, C. *Sur le Haut-Congo.* P., 1888.

*44 COQUILHAT, C. "Chez les Bangalas. Sur le Haut-Congo," *Rev. de Belgique*, 53:35–67.

45 COQUILHAT, C. "Le Congo et la tribu des Bangalas," *Soc. Géog. d'Anvers, Rep.*, 9:625–46.

46 COQUILHAT, C. "Le Haut-Congo," *Soc. Ingénieurs et Industriels, Bul.*, 1886, fasc. 2:42–47.

47 COTTON, P. H. G. POWELL-. *In Unknown Africa.* L., 1904.

48 CRAWFURD, J. "On the Physical and Mental Characteristics of the Negro," *Ethn. Soc., Trans.*, N. S., 4:212–39.

*49 CRUICKSHANK, B. *Eighteen Years on the Gold Coast of Africa.* L., 1853.

*50 CUNNINGHAM, J. F. *Uganda and Its Peoples.* L., 1905.

*51 DALE, G. "An Account of the Principal Customs and Habits of the Natives Inhabiting the Bondei Country," *Jl. Anth. Inst.*, 25:182–239.

*52 DEKEN, P. DE. "Deux ans au Congo," *Missions en Chine et au Congo*, 3:234–39, and continuing to 4:20–23 (16 papers).

*53 DENNETT, R. E. *At the Back of the Black Man's Mind.* L., 1906.

[Mr. Dennett is thought to know more of this question than anybody, but it is hard to get back of his mind also. Contains important details, especially on fetish and kingship.]

54 DESPLAGNES, L. *Le plateau central nigérien.* P., 1907.

55 DOWD, J. *The Negro Races: A Sociological Study.* N. Y., 1907.

[A treatment of African culture by geographical zones.]

56 DUVEYRIER, H. *Exploration du Sahara: Les Touâreg du Nord.* P., 1864.

*57 ELLIS, A. B. *The Tshi-speaking Peoples of the Gold Coast of West Africa.* L., 1887.

*58 ELLIS, A. B. *The Ewe-speaking Peoples of the Slave Coast of West Africa.* L., 1890.

*59 ELLIS, A. B. *The Yoruba-speaking Peoples of the Slave Coast of West Africa.* L., 1894.

*60 ELLIS, A. B. *History of the Gold Coast.* L., 1893.

61 ENDEMANN, K. "Mittheilungen über die Sotho-Neger," *Zeits. f. Ethn.* 6:16–66.

62 FIES, K. "Der Hostamm in Deutsch-Togo," *Globus*, 87:13–17, 72–78.

63 FITZ GERALD, W. W. A. *Travels in the Coastlands of British East Africa and the Islands of Zanzibar and Pemba.* L., 1898.

*64 FORBES, F. E. *Dahomey and the Dahomans.* L., 1851.

*64a FRANÇOIS, H. v. *Nama und Damara, Deutsch-Süd-West-Afrika.* Magdeburg, 1895.

65 FREEMAN, R. A. *Travels and Life in Ashanti and Jaman.* Westminster, 1898.

*66 FRITSCH, G. *Die Eingeborenen Süd-Afrikas.* Breslau, 1872.

*67 FRITSCH, G. *Drei Jahre in Süd-Afrika.* Breslau, 1868.

68 FRITSCH, G. "Die afrikanischen Büschmänner als Urrasse," *Zeits. f. Ethn.*, 12:289–300.

69 FROBENIUS, H. *Die Heiden-Neger des ägyptischen Sudan.* B., 1893.
70 FROBENIUS, L. *Im Schatten der Kongostaates.* B., 1907.
*71 FROBENIUS, L. *Ursprung der afrikanischen Kulturen.* B., 1898.
*72 FROBENIUS, L. "The Origin of African Civilisations," *Smiths. Inst., Rep.* for 1898:637–50.
*73*a* FROBENIUS, L. "Der westafrikanische Kulturkreis," *Petermann's Mitth.*, 43:225–36, 262–67; 44:193–204, 265–71.
*74 FÜLLEBORN, F. *Das deutsche Nyassa und Ruwumagebiet: Land und Leute.* (*Deutsch Ost-Afrika*, vol. 9.) B., 1906.
[Comment in Bibliography 14:49.]
74*a* FÜLLEBORN, F. *Anthropologie der Nord-Nyassa-Länder.* B., 1902.
[Altogether on physical anthropology.]
74*b* GAUTIER ET CHUDEAU. *Missions au Sahara.* P., 1908.
75 GIRARD, H. "Yakomas et Bougous. Anthropophages du Haut-Ubanghi," *L'anth.*, 12:51–91.
76 GÖTZEN, G. A. VON. *Durch Afrika von Ost nach West.* B., 1899.
77 GOTTSHLING, E. "The Bawenda: a Sketch of Their History and Customs," *Jl. Anth. Inst.*, 35:365–86.
*78 GRANVILLE, R. K. "Notes on the Jekris, Sobos, and the Ijos of the Warri District of the Niger Coast Protectorate," *Jl. Anth. Inst.*, 28:104–26.
79 GUESSFELDT, P. "Zur Kenntniss der Loango-Neger," *Zeits. f. Ethn.*, 8:203–16.
79*a* GUTMANN, B. *Dichten und Denken der Dschagganeger.* Lpz., 1909.
*80 HALKIN, J. *Quelques peuplades du district de l'Uelé: I, Introduction, Les Ababua.* Liège, 1907.
81 HAMY, E. T. "The Home of the Troglodytes," *Smiths. Inst., Rep.* for 1891:425–31. (From *L'anth.*, 2:529–36.)
*82 HAMY, E. T. "Les races nègres," *L'anth.*, 8:257–271.
83 HANOTEAU, A., ET LETOURNEAUX, A. *La Kabylie.* ed. 2. P., 1893.
84 HARDWICK, A. ARKELL-. *An Ivory Trader in North Kenia.* L., 1903.
85 HARTMANN, R. *Die Völker Afrikas.* (*Internat. wissenschaftl. Bibliothek*, 38.) Lpz., 1879.
86 HARTMANN, R. *Die Nigritier.* B., 1876.
87 HERVÉ, G. "Noirs et blancs: le croisement des races aux États-Unis et la théorie de la 'miscegénation,'" *Rev. de l'École d'Anth.*, 16:337–58.
88 HINDE, S. L. *The Last of the Masai.* L., 1901.
*89 HOBLEY, C. W. "Anthropological Studies in Kavirondo and Nandi," *Jl. Anth. Inst.*, 33:325–59.
*90 HOLLIS, A. C. *The Masai: Their Language and Folk-lore.* Oxf., 1905.
*91 HOLLIS, A. C. *The Nandi: Their Language and Folk-lore.* Oxf., 1909.
*92 HOLLUB, E. "Die Ma-Atabele," *Zeits. f. Ethn.*, 25:177–206.
*93 HOLUB, E. *Seven Years in South Africa.* L., 1881.
94 HORE, E. C. "On the Twelve Tribes of Tanganyika," *Jl. Anth. Inst.*, 12:2–20.
95 HOVELAQUE, A. *Les nègres de l'Afrique sus-équatoriale.* (*Bibl. d'Anth.*, 9.) P. 1889.

96 HUTCHINSON, T. J. "On the Social and Domestic Traits of the African Tribes; with a Glance at Their Superstitions, Cannibalism, etc.," *Ethn. Soc., Trans.*, N. S., 1:327–40.

97 HUTTER, D. "Völkerbilder aus Kamerun," *Globus*, 87:234–38, 301–4, 365–70.

*98 IRLE, I. *Die Herero.* Gütersloh, 1906.

*99 JOHNSTON, H. *The Uganda Protectorate.* N. Y., 1904.

*100 JOHNSTON, H. *Liberia.* N. Y., 1906.
[Also a paper, "Liberia," *Smiths. Inst., Rep.* for 1905:247–64.]

*101 JOHNSTON, H. *George Grenfell and the Congo.* L., 1908.

102 JOHNSTON, H. *The River Congo.* L., 1884.

*103 JOHNSTON, H. "On the Races of the Congo," *Jl. Anth. Inst.*, 13:461–80.

104 JOHNSTON, H. "The People of Equatorial Africa," *Jl. Anth. Inst.*, 15:3–17.

*105 JOHNSTON, H. "The Pygmies of the Great Congo Forest," *Smiths. Inst., Rep.* for 1902:479–91.

106 JOHNSTONE, H. B. "Notes on the Customs of the Tribes Occupying Mombasa Sub-District, British East Africa," *Jl. Anth. Inst.*, 32:263–72.

*107 JUNKER, W. *Travels in Africa.* (Tr.) L., 1893.

*108 KEANE, A. H. *Ethnology,* "Homo Æthiopicus," 242–94.

*109 KEANE, A. H. *Man Past and Present,* "The African Negro," 35–125.

*110 KIDD, D. *The Essential Kafir.* L., 1904.

111 KIDD, D. *Kafir Socialism and the Dawn of Individualism.* L., 1908.

*112 KINGSLEY, M. H. *Travels in West Africa.* N. Y., 1897.

*113 KINGSLEY, M. H. *West African Studies.* N. Y., 1901.
[Miss Kingsley's books are refreshing literature as well as good ethnology.]

114 KLOSE, H. *Togo.* B., 1899.

*115 KOLBEN, P. *Present State of the Cape of Good Hope.* (Tr.) L., 1731.

*116 KOLLMAN, P. *The Victoria Nyanza.* (Tr.) L., 1899.

*117 KRAPF, L. *Travels, Researches, and Missionary Labours during an Eighteen Years' Residence in Eastern Africa.* L., 1860.

*118 KROPF, A. *Das Volk der Xosa-Kaffern im östlichen Südafrika.* B., 1889.

119 KROPF, A. *A Kaffir-English Dictionary.* (Lovedale Mission Press.) S. Af., 1898.

*120 KÜRCHHOFF, D. "Maasse und Gewichte in Afrika," *Zeits. f. Ethn.*, 40:289–342.

*121 LANE, E. W. *Manners and Customs of the Modern Egyptians.* L., 1835.

122 LAPICQUE, L. "Les nègres d'Asie et la race nègre en général," *Soc. d'Anth. de Paris, Bul.*, 5 Sér., 7:233–49.

*123 LENZ, O. "Oesterreichische Kongo-Expedition," *Geog. Gesell. zu Wien, Mitth.*, 29:27–41, and continuing to 575–92 (7 papers).

124 LESLIE, D. *Among the Zulus and Amatongas.* Edin., 1875.

*124a LEVENSTEIN, S. "Die Malereien der Buschmänner in Süd-Afrika," *Internat. Arch. f. Ethnog.*, 18:1–44.

125 LICHTENSTEIN, H. *Travels in Southern Africa.* (Tr.) L., 1815.

*126 LIVINGSTONE, D. *Missionary Travels and Researches in South Africa* L., 1857.

*127 LIVINGSTONE, D. *Narrative of an Expedition to the Zambesi.* L., 1865.

*128 LIVINGSTONE, D. *Last Journals in Central Africa* (ed. Waller). L., 1880.
*129 LUSCHAN, F. v. *Beiträge zur Völkerkunde der deutschen Schutzgebiete.* B., 1897.
*130 LUSCHAN, F. v. "Fremder Einfluss in Afrika," *Westermanns Illust. deutsche Monatshefte*, 84:709–28.
[On borrowing as compared with native culture.]
*131 LUSCHAN, F. v. "Eisentechnik in Afrika," *Zeits. f. Ethn.*, 41:22–53.
*131*a* LUSCHAN, F. V. "Bericht über eine Reise in Südafrika," *Zeits. f. Ethn.*, 38:863–95.
*132 MABILLE, A. "The Basuto of Basutoland," *African Soc., Jl.*, 5:233–51, 351–76.
133 MCCOAN, J. C. *Egypt as It Is.* N. Y., 1877.
134 MACDONALD, D. *Africana.* L., 1882.
135 MACDONALD, G. *The Gold Coast, Past and Present.* L., 1898.
*136 MACDONALD, J. "Manners, Customs, Superstitions, and Religions of South African Tribes," *Jl. Anth. Inst.*, 19:264–96; 20:113–40.
137 MACDONALD, J. "East Central African Customs," *Jl. Anth. Inst.*, 22:99–122.
138 MÄHLY, E. "Studien von der Goldküste," *Globus*, 68:149–51, 169–72, 189–91.
139 MANN, R. J. "The Kaffir Race of Natal," *Ethn. Soc., Trans.*, N. S., 5:277–97.
140 MASPERO, G. *The Dawn of Civilization.* (Tr.) L., 1897.
141 MAYR, F. "The Zulu Kafirs of Natal," *Anthropos*, 1:453–71.
142 MEAKIN, B. *The Moors.* L., 1902.
*143 MERKER, M. *Die Masai.* B., 1904.
144 MILLIGAN, R. H. *The Jungle Folk of Africa.* N. Y., 1908.
145 MONDIÈRE, A. T. "Les négres chez eux," *Rev. d'anth.*, 9:621–50; 10:73–107.
*146 NACHTIGAL, G. *Sahara und Sudan.* B., 1889.
147 NORTHCOTE, G. A. S. "The Nilotic Kavirondo," *Jl. Anth. Inst.*, 37:58–66.
148 OLLONE, CAPT. D'. *De la Côte d'Ivoire au Sudan et à la Guinée.* P., 1901.
*149 OVERBERGH, C. VAN. *1, Les Bangala; 2, Les Mayombe; 3, Les Basonge; 4, Les Mangbetu.* Br., 1907–9.
[First vols. (on the Congo) of *Collection de monographies ethnographiques*, based on very full materials and to be extended to all countries. Very important, though the results are given in too summarized a form.]
*150 PARK, M. *Travels in the Interior Districts of Africa.* L., 1900 [orig. 1799].
151 PARKE, T. H. *My Personal Experiences in Equatorial Africa.* L., 1891.
[Parke was physician to one of Stanley's expeditions.]
152 PARKINSON, J. "A Note on the Epik and Ekoi Tribes of the Eastern Province of Southern Nigeria," *Jl. Anth. Inst.*, 37:261–67.
*153 PARTRIDGE, C. *Cross River Natives.* L., 1905.
*154 PASSARGE, S. *Südafrika.* Lpz., 1908.
[Passarge is primarily a geographer but his ethnological work is of the first rank.]
*155 PASSARGE, S. *Die Buschmänner der Kalahari.* B., 1907.
[Paper with same title in *Dancklemans Mittheilungen*, 18:194–292. See a criticism and reply by Fritsch, *Zeits. f. Ethn.*, 38:71–79.]

*156 PASSARGE, S. *Adamaua.* B., 1895.
*157 PASSARGE, S. "Die Mambukuschu," *Globus*, 87:229–34, 295–301.
*158 PAULITSCHKE, P. *Ethnographie Nordost-Afrikas.* B., 1893.
*158*a* PAULISTSCHKE, P. "Kulturbilder aus den Somâl- und Gallaländern von Harar," *Globus*, 56:1–6, 17–22, 36–42, 65–69.
*159 PECHUËL-LOESCHE, E. *Volkskunde von Loango.* Stutt., 1909.
[A distinguished work.]
*160 PHILLIPS, R. C. "The Lower Congo: a Sociological Study," *Jl. Anth. Inst.*, 17:214–33.
*161 POGGE, P. *Im Reiche des Muata Jamwo.* B., 1880.
162 PROYART L. B. *History of Loango.* (PINKERTON, *Collection of Voyage and Travels*, 16.) L., 1814.
*163 QUATREFAGES, A. DE. *The Pygmies.* (Tr. Starr.) N. Y., 1895.
*163*a* QUEDENFELDT, M. "Eintheilung und Verbreitung der Berberbevölkerung in Marokko," *Zeits. f. Ethn.*, 20:98–130, 146–60, 184–210; 21:81–108, 157–201.
*164 RAMSEYER, F. A., AND KÜHNE, J. *Four Years in Ashantee.* (Tr.) L., 1875.
*165 RATZEL, F. *History of Mankind*, 2:237–562; 3:1–145, 180–312.
166 REINDORF, C. C. *History of the Gold Coast and Asante.* L., 1896.
167 ROBINSON, C. *Nigeria, Our Latest Protectorate.* L., 1900.
*168 ROBINSON, C. H. *Hausaland.* L., 1900.
*169 ROSCOE, J. "Notes on the Manners and Customs of the Baganda," *Jl. Anth. Inst.*, 31:117–30; 32:25–80.
170 ROSCOE, J. "The Bahima: a Cow Tribe of Enkole in the Uganda Protectorate," *Jl. Anth. Inst.*, 37:93–118.
*171 ROTH, H. L. *Great Benin.* Halifax, 1903.
*172 ROTH, H. L. "Notes on Benin Customs," *Internat. Arch. f. Ethnog.* 11:235–42.
*172*a* RUELLE, E. "Notes . . . . sur quelques populations noires . . . . de l'Afrique occidentale française," *L'anth.*, 15:519–61, 657–703.
173 SARRAZIN, H. *Races humaines du Soudan français.* Chambéry, 1901.
*174 SCHULTZE, L. *Aus Namaland und Kalahari.* Jena, 1907.
*175 SCHWEINFURTH, G. *The Heart of Africa.* (Tr.) N. Y., 1874.
*176 SEIDEL, H. "Die Ephe-Neger," *Globus*, 68:313–17, 328–32.
177 SHELDON, M. FRENCH-. "Customs Among the Natives of East Africa, from Teita to Kilemegalia, With Special Reference to Their Women and Children," *Jl. Anth. Inst.*, 21:358–96.
*178 SHOOTER, J. *The Kafirs of Natal and the Zulu Country.* L., 1857.
179 SIEVERS, W. *Afrika.* Lpz., 1901.
*180 SOUTH AFRICAN NATIVE RACES COMMITTEE (ed.). *The Native Races of South Africa; Their Economic and Social Condition.* L., 1901. Supplementary vol.: *The S. African Natives.* L., 1908.
181 SPECHT, C. A. *Africanische Sitten und Gebräuche.* Lpz., 1891.
182 SPEKE, J. H. *Journal of the Discovery of the Source of the Nile.* L., 1863.
183 SPENCER, H. *Descriptive Sociology*, 4.
184 STANLEY, H. M. *How I Found Livingstone.* L., 1874.

*185 STANLEY, H. M. *Through the Dark Continent.* L., 1878.

*186 STANLEY, H. M. *In Darkest Africa.* L., 1890.

*187 STANLEY, H. M. *The Congo and the Founding of the Free State.* L., 1885.

*187*a* STARR, F. "Ethnographic Notes from the Congo Free State: An African Miscellany," *Davenport Acad. of Sci.*, 12:96–222.

188 STIGAND, C. H. "Notes on the Natives of Nyassaland, N. E. Rhodesia, and Portuguese Zambesia," *Jl. Anth. Inst.*, 37:119–32.

189 STOW, G. W. *The Native Races of South Africa: A History of the Intrusion of the Hottentots and Bantu into the Hunting Grounds of the Bushmen.* L., 1905.

[Excellent as history but inadequate as ethnology.]

190 STUHLMANN, F. *Mit Emin Pascha ins Herz von Afrika.* B., 1894.

*190*a* STUHLMANN, F. *Beiträge zur Kulturgeschichte von Ostafrika* (*Deutsch-Ost-Afrika*, vol. 10) B., 1909.

[Sub-title: "General Observations and Studies on the Introduction and Economic Significance of Food-Plants and Domesticated Animals, with Special Reference to German East Africa." Of importance for Part I.]

191 TATE, H. E. "Notes on the Kikuyu and Kamba Tribes of British East Africa," *Jl. Anth. Inst.*, 34:130–48.

*192 THEAL, G. M. *History and Ethnography of Africa South of the Zambesi.* L., 1907.

*193 TILLINGHAST, J. A. "The Negro in Africa and America," *Am. Econ. Assoc., Pub.*, 3d ser., 3:399–637. (Separately, N. Y., 1900.)

[Good introduction to the negro question.]

*194 TORDAY, E., AND JOYCE, T. A. "Notes on the Ethnography of the Ba-Huana," *Jl. Anth. Inst.*, 36:272–301.

*195 TORDAY, E., AND JOYCE, T. A. "Notes on the Ethnography of the Ba-Mbala," *Jl. Anth. Inst.*, 35:398–426.

*196 TORDAY, E., AND JOYCE, T. A. "Notes on the Ethnography of the Ba-Yaka," *Jl. Anth. Inst.*, 36:39–58.

*197 TORDAY, E., AND JOYCE, T. A. "On the Ethnology of the South-Western Congo Free State," *Jl. Anth. Inst.*, 37:133–56.

*198 TSCHOFFEN. "Au Congo: Organisation sociale et coutumes judiciaires des noirs," *Soc. Royale Belge de Géog., Bul.*, 20:244–72.

199 TUCKER, A. R. Eighteen Years in Uganda and East Africa. L., 1908.

*200 VELTEN, C. *Schilderungen der Suaheli.* Göttingen, 1901.

[Based on Wissmann, Bumiller, Götzen, and others.]

*201 VELTEN, C. *Sitten und Gebräuche der Suaheli.* Göttingen, 1903.

*201*a* VERNER, S. P. *Pioneering in Central Africa.* Richmond, Va., 1903.

[A good missionary report, resembling Livingstone.]

202 WOLF, L. "Volkstämme Central Afrikas," *Zeits. f. Ethn.*, 18:725–52.

[Of importance mainly for the physical anthropology of this region.]

*202*a* WAITZ, T. *Anthropologie der Naturvölker*, 2:1–524.

203 WARD, H. "Ethnographical Notes Relating to the Congo Tribes," *Jl. Anth. Inst.*, 24:285–99.

204 WARD, H. *Five Years with Congo Cannibals.* L., 1890.

*205 WERTHER, C. W. *Die Mittleren Hochländer des nördlichen Deutsch-Ost Afrikas.* . . . . B., 1898.

[Largely geographical and zoölogical, but contains von Luschan's valuable paper on the ethnography of this region, 323–81.]

*206 WEULE, K. *Wissenschaftliche Ergebnisse meiner ethnographischen Forschungsreise in den Südosten Deutsch-Ostafrikas.* B., 1908.

[For translation see Bibliography 14:65. The following is more popular.]

207 WEULE, K. *Negerleben in Ostafrika.* Lpz., 1908.

*208 WIDENMANN, A. *Die Kilimandscharo-Bevölkerung.* Gotha, 1899.

*209 WILSON, C. T., AND FELKIN, R. W. *Uganda and the Egyptian Sudan.* L., 1882.

210 WISSMANN, H. v. *Unter deutscher Flagge quer durch Afrika.* B., 1888.

211 WISSMANN, H. v. *My Second Journey through Equatorial Afrika.* (Tr. L., 1891.

212 WISSMANN, H. v. *Im Innern Afrikas. Die Kassai.* Lpz., 1891.

213 WINTERBOTTOM, T. *An Account of the Native Africans in the Neighborhood of Sierra Leone.* L., 1803.

*214 WYLDE, A. B. *Modern Abyssinia.* L., 1901.

[The following bibliography is published by the Library of Congress: *Select List of References on the Negro Question*, by A. P. C. GRIFFIN, 1903. 28 pp. Of value for the Negro in America.]

BIBLIOGRAPHY 10

AUSTRALIA AND TASMANIA

1 ANGAS, G. F. *Savage Life and Scenes in Australia and New Zealand.* L., 1850.

2 BARRINGTON, G. *The History of New South Wales.* L., 1810.

3 BEDDOE, J. "Aborigines of Queensland," *Jl. Anth. Inst.*, 7:145–48.

4 BLAND, R. H. "Aborigines of Western Australia in the Early History of That Colony," *Jl. Anth. Inst.*, 16:341–43.

5 BONNEY, F. "On Some Customs of the Aborigines of the River Darling, N. S. Wales," *Jl. Anth. Inst.*, 13:122–36.

6 BONWICK, J. "The Australian Natives," *Jl. Anth. Inst.*, 16:201–10.

*7 BONWICK, J. *Daily Life and Origin of the Tasmanians.* L., 1870.

8 BONWICK, J. *The Last of Tasmanians.* L., 1869.

9 BONWICK, J. *Port Phillip Settlement.* L., 1883.

[Very interesting history. Ethnology incidental.]

10 BONWICK, J. *William Buckley, the Wild White Man, and His Port Phillip Black Friends.* Melbourne, 1856.

11 BROWNE, J. "Die Eingeborenen Australiens," *Petermann's Mitth.*, 2:443–54.

12 BUNCE, D. *Australasiatic Reminiscences of Twenty-Three Years' Wanderings.* Melbourne, 1857.

*13 CALDER, J. E. "Some Account of the Wars of Extirpation, and Habits of the Native Tribes of Tasmania," *Jl. Anth. Inst.*, 3:7–29.

14 CALVERT, A. F. *Aborigines of Western Australia.* L., 1894.

15 CAMERON, A. L. P. "Notes on Some Tribes of N. S. Wales," *Jl. Anth. Inst.*, 14:344–70.

*16 CARMICHAEL, C. H. E. "On a Benedictine Missionary's Account of the Natives of Australia and Oceania," *Jl. Anth. Inst.*, 7:280–93.

17 CHRISTMANN, F. *Australien.* (Ed. Oberländer.) Lpz., 1880.

*18 CLEMENT, E. "Ethnographic Notes on Western Australia," *Internat. Arch. f. Ethnog.*, 16:1–29.

19 CROZET. *Voyage to Tasmania in the Years 1771–72.* (Tr.) L., 1891.

*20 CUNOW, H. *Die Verwandtschafts-Organisationen der Australneger.* Stutt., 1894.

*21 CURR, E. M. *The Australian Race.* Melbourne and L., 1887.

22 CURR, E. M. *Recollections of Squatting in Victoria.* Melbourne and L., 1883.

23 DAWSON, J. *Australian Aborigines.* Melbourne, 1881.

*23*a* DIEDERICH, F. "Zur Beurtheilung der Bevölkerungsverhältnisse Inner-Westaustraliens," *Globus*, 55:289–92, 313–14, 321–24, 346–48, 361–66.
[Of importance for Part I.]

24 ENRIGHT, W. J. "The Language, Weapons and Manufactures of the Aborigines of Port Stephens, N. S. W.," *Roy. Soc. N. S. Wales, Jl.*, 34:103–17.

*25 EYRE, E. J. *Journals of Expeditions of Discovery into Central Australia.* L., 1845.

*26 FISON, L., AND HOWITT, A. W. *Kamilaroi and Kurnai.* Melbourne, 1880.
[Rather superseded by Howitt's *Native Tribes*, but remains important.]

27 FRASER J. *Aborigines of New South Wales.* Sydney, 1892.

*28 GASON, S. "Manners and Customs of the Dieyerie Tribe," in WOODS, *Native Tribes of South Australia*, 253–307.

*29 GREY, SIR G. *Journals of Two Expeditions of Discovery in North-West and West Australia.* L., 1841.

30 HENDERSON, J. *Excursions and Adventures in New South Wales.* L., 1851.

31 HODGKINSON, C. *Australia from Port Macquarie to Moreton Bay.* L., 1845.

32 HODGSON, C. P. *Reminiscences of Australia.* L., 1846.

*33 HORN, W. A. *Report of the Work of the Scientific Expedition to Central Australia*, vol. 4, "Anthropology." L., 1896.

*34 HOWITT, A. W. *Native Tribes of S. E. Australia.* L., 1904.
[This, the volume and bulletins of W. E. Roth, and the two vols. of Spencer and Gillen, are of about equal merit, and represent the best work on Australia.]

35 HOWITT, A. W. "Australian Group-Relationships," *Jl. Anth. Inst.*, 37:279–89.

36 HOWITT, A. W. "The Dieri and Other Kindred Tribes of Central Australia," *Jl. Anth. Inst.*, 20:30–104.

37 HOWITT, W. *History of Discovery in Australia, Tasmania, and New Zealand.* L., 1865.
[Fascinating history with some ethnology.

*38 KEANE, A. H. *Man Past and Present*, "Australians and Tasmanians," 145–58.

40 LEICHARDT, F. W. L. *Journal of an Overland Expedition in Australia . . . . , 1844–45.* L., 1847.

41 LEICHARDT, F. W. L. *Dr. L. Leichardt's Briefe.* Hamburg, 1881.

*42 LUMHOLTZ, C. *Among Cannibals.* N. Y., 1889.

*43 MATHEW, J. *Eaglehawk and Crow.* L., 1898.

43a MATTHEWS, C. H. S. *A Parson in the Australian Bush.* L., 1908.

*44 MATHEWS, R. H. "Ethnological Notes on the Aboriginal Tribes of N. S. Wales and Victoria," *Royal Soc. of New South Wales, Jl.*, 38:203–81.

*45 MATHEWS, R. H. *Ethnological Notes on the Aboriginal Tribes of N. S. Wales and Victoria.* Sydney, 1905.

*46 MATHEWS, R. H. "Ethnological Notes on the Aboriginal Tribes of Queensland," *Roy. Geog. Soc. of Australia, Proc. and Trans.*, 20:49–75.

*47 MATHEWS, R. H. "Ethnological Notes on the Aboriginal Tribes of Western Australia," *Roy. Geog. Soc. of Australia, Proc. and Trans.*, 19:43–72.

*48 MATHEWS, R. H. "Sociology of Some Australian Tribes," *Roy. Soc. of New South Wales, Jl. and Proc.*, 39:104–23.

49 MATHEWS, R. H. "Some Aboriginal Tribes of Western Australia," *Roy. Soc. of New South Wales, Jl.*, 35:17–22.

*50 MATHEWS, R. H. "The Victorian Aborigines," *Am. Anth.*, 11:325–43.

51 MATHEWS, R. H. "The Wombya Organisation of the Australian Aborigines," *Am. Anth.*, N. S., 2:494–501.

*52 MATHEWS, R. H., AND EVERETT, M. M. "The Organisation, Language and Initiation Ceremonies of the Aborigines of the S. E. Coast of N. S. Wales," *Roy. Soc. of New South Wales, Jl.*, 34:262–80.

*54 MEYER, H. E. "Manners and Customs of the Aborigines of the Encounter Bay Tribe," in WOODS, *Native Tribes of South Australia*, 185–206.

55 MORGAN, J. *The Life and Adventures of Wm. Buckley, Thirty-two Years a Wanderer amongst the Aborigines of the Unexplored Country around Port Phillip.* Hobart, 1852.

56 OBERLÄNDER, R. "Die Eingeborenen der australischen Kolonie Victoria," *Globus*, 4:238–42, 278–82.

57 OLDFIELD, A. "On the Aborigines of Australia," *Ethn. Soc., Trans.*, N. S., 3:215–98.

*58 PALMER, E. "Notes on Some Australian Tribes," *Jl. Anth. Inst.*, 13:276–346.

59 PARKER, K. L. *The Euahlayi Tribe.* L., 1905.

*60 RATZEL, F. *History of Mankind*, 1:333–90.

61 RÉCLUS, É. "Contributions à la sociologie des Australiens," *Rev. Anth.*, 15:240–83; 16:20–43.

62 RIDLEY, W. *Kamilaroi, Dippil, and Turrubul.* Sydney, 1866.

*63 ROTH, H. L., AND BUTLER, M. E. *The Aborigines of Tasmania.* Halifax, 1899.

[The best single work on Tasmania.]

*64 ROTH, W. E. *Ethnological Studies among the North-West-Central Queensland Aborigines.* Brisbane and L., 1897.

[See remark on title 34.]

*65 ROTH, W. E. *Bulletins of North Queensland Ethnography.*

Twelve papers of unsurpassed interest. Nos. 1–8 (1901–6) printed at Brisbane, Department of the Home Secretary of Queensland, and Nos. 9–12 in the *Records of the Australian Museum*, 6:365–403; 7:1–17, 74–107, 166–85. They cover all phases of Australian native life, and will probably appear in book form.]

66 RUSDEN, G. W. *History of Australia.* Melbourne, 1883.

*67 SALVADO, R. *Mémoires historiques sur l'Australie.* (Tr. Falcimagne.) P., 1854.

[Early sympathetic acccount of natives of Western Australia by a Benedictine missionary. Translated from the Italian. Summarized in the paper by Carmichael in this list.]

*68 SCHMIDT, P. W. "Die Stellung der Aranda unter den australischen Stämmen," *Zeits. f. Ethn.*, 40:866–901.

*68*a* SCHMIDT, P. W. "Sociologische und religiös-ethische Gruppierung der Australier," *Zeits. f. Ethn.*, 41:328–77.

69 SEMON, R. *In the Australian Bush.* (Tr.) L., 1899.

70 SMITH, P. W. BASSETT-. "The Aborigines of N. W. Australia," *Jl. Anth. Inst.*, 23:324–31.

*71 SMYTH, R. B. *Aborigines of Victoria.* Melbourne, 1878.

*72 SPENCER, B., AND GILLEN, F. J. *The Native Tribes of Central Australia.* L., 1899.

[See remark on title 34.]

*73 SPENCER, B., AND GILLEN, F. J. *The Northern Tribes of Central Australia.* L., 1904.

74 SPENCER, H. *Descriptive Sociology*, 3.

*75 STREHLOW, C. *Die Aranda und Loritjastämme in Zentralaustralien.* Frankf., 1908.

[Important in connection with the work of Spencer and Gillen. See Bibliography 14: 71.]

76 STUART, J. McD. *Explorations in Australia.* L., 1864.

*77 TAPLIN, G. *Folklore, Manners, Customs, and Language of the South Australian Aborigines.* Adelaide, 1878.

78 TAPLIN, G. "The Narrinyeri," in WOODS, *Native Tribes of South Australia*, 1–156.

*79 THOMAS, N. W. *The Natives of Australia.* L., 1906.

80 TYLOR, E. B. "On the Tasmanians as Representatives of Palaeolithic Man," *Jl. Anth. Inst.*, 23:141–52.

*81 WAITZ, T. [AND GERLAND, G.]. *Anthropologie der Naturvölker*, 6:706–829.

82 WALKER, J. B. *Early Tasmania.* (Walker Memorial vol., *Roy. Soc. of Tasmania.*) 1902.

83 WARBURTON, D. E. *Journey across the Western Interior of Australia.* L., 1875.

*84 WOODS, J. D. (ed.). *The Native Tribes of South Australia.* Adelaide, 1879.

85 WOODS, J. E. T. *History of Discovery and Exploration of Australia.* L., 1865.

BIBLIOGRAPHY 11

OCEANIA AND THE MALAY ARCHIPELAGO

*1 ALBERTIS, L. M. D'. *New Guinea.* L., 1881.

[Interesting account of exploration with important ethnology.]

*2 ANNADALE, N., AND ROBINSON, H. C. *Fasciculi Malayenses. Anthropological and Zoölogical Results of an Expedition to Perak and the Siamese Malay States.* L., 1904.

[Comment in Bibliography 14:72.]

*3 ATKINSON, F. W. *The Philippine Islands.* Bost., 1905.
*4 ATKINSON, J. J. "The Natives of New Caledonia," *Folk-Lore*, 14:243–59.
*5 BAILEY, J. "An Account of the Wild Tribes of the Veddahs of Ceylon," *Ethn. Soc., Trans.*, N. S., 2:278–320.
6 BEARDMORE, E. "The Natives of Mowat, Daudai, New Guinea," *Jl. Anth. Inst.*, 19:459–73.
7 BEST, E. "Maori Nomenclature," *Jl. Anth. Inst.*, 32:182–201.
8 BEVAN, T. F. *Toil, Travel, and Discovery in British New Guinea.* L., 1890.
*9 BLAIR, E. H., AND ROBERTSON, J. A. *The Philippine Islands, 1493–1803.* Cleveland, 1903–8.
[Translation of the records of the Catholic missions, Spanish occupancy, exploration, etc. A monumental work in 55 vols., but of incidental ethnological interest.]
10 BLUMENTRITT, F. *Versuch einer Ethnographie der Philippinen.* Gotha, 1882.
[Blumentritt is honored as the pioneer in scientific work in the Philippines, but he was never in the islands. His work is inaccurate, and is being superseded by the researches of the Bureau of Science, Division of Ethnology, of the Philippine government.]
11 BLUMENTRITT, F. "List of the Native Tribes of the Philippines and of the Languages Spoken by Them," *Smiths. Inst., Rep.* for 1899:527–47.
*12 BOCK, C. *The Head-Hunters of Borneo.* L., 1881.
13 BOWRING, J. *A Visit to the Philippine Islands.* L., 1859.
14 BOWRING, J. *The Kingdom and People of Siam.* L., 1857.
15 BOYLE, F. *Adventures among the Dyaks of Borneo.* L., 1865.
*16 BROOKE, C. *Ten Years in Sarâwak.* L., 1866.
17 BROWN, J. M. *Maori and Polynesian, their Origin, History, and Culture.* L., 1907.
18 BROWN, W. *New Zealand and Its Aborigines.* L., 1845.
*19 BULOW, W. v. "Zur Ethnographie, Anthropologie und Urgeschichte der Malayo-Polynesier," *Internat. Arch. f. Ethnog.*, 18:152–66.
*19*a* BÜLOW, W. v. "Beiträge zur Ethnographie der Samoa-Inseln," *Internat. Arch. f. Ethnog.*, 13:177–94.
20 CATOR, D. *Everyday Life among the Head-Hunters.* N. Y., 1905.
21 CHALMERS, J. "Taoripi" [New Guinea], *Jl. Anth. Inst.*, 27:326–34.
22 CHALMERS, J. *Work and Adventure in New Guinea.* L., 1902.
23 CHAMBERLAIN, B. H. "The Luchu Islands and Their Inhabitants," *Geog. Jl.*, 5:289–319, 446–62, 534–44.
24 CHEEVER, H. *Life in the Sandwich Islands.* N. Y., 1851.
*25 CHRISTIAN, F. W. *The Caroline Islands.* N. Y., 1899.
26 COAN, T. M. "Hawaiian Ethnography," *Am. Geog. Soc., Jl.*, 31:24–30.
*27 CODRINGTON, R. H. *The Melanesians.* Oxf., 1891.
28 CODRINGTON, R. H. *The Melanesian Languages.* Oxf., 1885.
*29 COLE, F. C. "The Tinggian," *Philippine Jl. of Sci.*, 3:197–211.
30 COLENSO, W. *On the Maori Races of New Zealand.* Wellington, 1865.
31 COMRIE, DR. "Anthropological Notes on New Guinea," *Jl. Anth. Inst.*, 6:102–13.
*32 COOK, CAPT. J. *Voyages of Discovery.*
[A good complete ed., in 2 vols., is that of Ward, Lock, Bowden & Co.]
*33 CRAWFURD, J. *History of the Indian Archipelago.* Edin., 1820.

34 DIEFFENBACH, E. *Travels in New Zealand.* L., 1843.
35 DRURY, R. *Journal During Fifteen Years' Captivity on the Island of Madagascar.* L., 1890.
*36 EARL, G. W. *The Papuans.* L., 1853.
*37 ELLIS, W. *Polynesian Researches.* L., 1859.
38 ELLIS, W. *Narrative of a Tour through Hawaii.* 2d ed. L., 1827.
39 ELLIS, W. *History of Madagascar.* L., 1838.
40 ELLIS, W. *Three Visits to Madagascar.* L., 1858.
41 ERSKINE, J. E. *Journal of a Cruise among the Islands of the Western Pacific.* L., 1853.
42 FINSCH, O. *Samoafahrten. Reisen in Kaiser Wilhelms-Land und Englisch-Neu-Guinea.* Lpz., 1888.
43 FINSCH, O. *Anthropologische Ergebnisse einer Reise in der Südsee und dem Malayischen Archipel.* B., 1884.
45 FORBES, H. O. "Ethnology of the Timor-Laut," *Jl. Anth. Inst.*, 13:8–32.
*46 FORBES, H. O. *A Naturalist's Wanderings in the Eastern Archipelago.* N. Y., 1885.
47 FORBES, H. O. "On Some of the Tribes of the Island of Timor," *Jl. Anth. Inst.*, 13:402–30.
48 FOREMAN, J. *Philippine Islands.* L., 1892.
*49 FORNANDER, R. *An Account of the Polynesian Race: Its Origin and Migrations.* 2d ed. L., 1890.
*50 FROBENIUS, L. "Die Kulturformen Ozeaniens," *Petermann's Mitth.*, 46: 204–15.
*51 FURNESS, W. H. *The Home-Life of Borneo Head-Hunters.* Ph., 1902.
*52 GARDINER, J. S. "The Natives of Rotuma," *Jl. Anth. Inst.*, 27:396–435, 458–524.
*53 GRÄBNER, F. "Kulturkreise und Kulturschichten in Ozeanien," *Zeits. Ethn.*, 37:28–53.
[A good point at which to begin the study of this region.]
54 GUISE, R. E. "On the Tribes Inhabiting the Mouth of the Wanigela River in New Guinea," *Jl. Anth. Inst.*, 28:205–19.
*55 HADDON, A. C. (ed). *Cambridge Anthropological Expedition to Torres Straits, Reports.* Cambridge, 1901–1908. Vols. 2–6.
[A very important series. In progress.]
*56 HADDON, A. C. *Head-Hunters: Black, White, and Brown.* L., 1901.
[This and the vols. by Bock and Furness are good.]
*57 HADDON, A. C. "The Ethnography of the Western Tribes of Torres Straits," *Jl. Anth. Inst.*, 19:297–440.
*58 HAGEN, B. *Anthropologischer Atlas ostasiatischer und melanesischer Völker* Wiesbaden, 1898.
*59 HAGEN, B. *Unter den Papuas.* Wiesbaden, 1899.
*60 HAGEN, B. *Die Orang Kubu auf Sumatra.* Frankf., 1908.
*61 HOSE, C. "The Natives of Borneo," *Jl. Anth. Inst.*, 23:156–71.
*62 HURGRONJE, S. *The Achehnese.* (Tr. O'Sullivan.) Ley., 1906.
[A great work.]
63 JAGOR, F. *Travels in the Philippines.* L., 1875.

*64 JENKS, A. E. "The Bontoc Igorot," *Pub. Bur. of Sci., Div. of Ethn.* (Manila), 1:1–266.

*64*a* JOEST, W. "Malayische Lieder und Tänze aus Ambon und den Uliase (Molukken)," *Internat. Arch. f. Ethnog.*, 5:1–34.

65 JOHNSTONE, J. C. *Maoria.* L., 1874.

66 JUNGHUHN, F. *Die Battaländer auf Sumatra.* (Tr.) B., 1847.

67 KAKYO, I. "Die wilden Stämme von Formosa," *Gesellsch. f. Erdk., Zeits.*, 34:63–74.

*68 KEANE, A. H. *Man Past and Present*, "The Oceanic Negroes," 126–45, 158–68; "The Oceanic Mongols," 228–64.

*69 KEANE, A. H. "On the Relations of the Indo-Chinese and Inter-Oceanic Races and Languages," *Jl. Anth. Inst.*, 9:254–90.

70 KLOSS, C. B. *In the Andamans and Nicobars.* L., 1903.

71 KNOCKER, F. W. "The Aborigines of Sungei Ujong," *Jl. Anth. Inst.*, 37:290–305.

*72 KRÄMER, A. *Die Samoa-Inseln.* Stutt., 1903.
[First class, by a scientific observer. The following title is more in the nature of travel.]

*73 KRÄMER, A. *Hawaii, Ostmikronesien und Samoa.* Stutt., 1906.

*74 KRIEGER, M. *Neu-Guinea.* (*Bibliothek der Länderkunde*, Vols. 5 and 6 [2 vols. in one].) B., 1899.
[First class.]

*75 KUBARY, J. S. *Ethnographische Beiträge zur Kenntniss des Karolinen Archipels.* Ley., 1895.
[Especially on food, trade, industry, architecture.]

75*a* KÜKENTHAL, W. *Forschungsreise in den Molukken und in Borneo.* Frankf. 1896.
[Primary natural history, but valuable for the anthropo-geography of this region.]

76 LANDOR, A. H. S. *The Gems of the East: Sixteen Thousand Miles of Research Travel among Wild and Tame Tribes of Enchanting Islands.* L., 1904.
[This and all of Landor's writings are to be avoided.]

77 LESSON, A. *Les Polynésiens.* P., 1880.

78 LOW, H. *Sarawak.* L., 1848.

*79 LUSCHAN, F. v. *Beiträge zur Völkerkunde der deutschen Schutzgebiete.* B., 1897.
[Von Luschan's work should always have serious attention. He is among the foremost anthropologists, and his special fields are Oceania and Africa.]

*80 LUSCHAN, F. v. *Beiträge zur Ethnographie von Neu-Guinea.* B., 1899.
[Reprint from Krieger, *Neu-Guinea*, 440–524.]

*81 LUSCHAN, F. v. "R. Parkinson's Beobachtungen auf Bóbolo und Hún," *Globus*, 78:69–78.

82 MAAS, A. *Bei liebenswürdigen Wilden: Ein Beitrag zur Kentniss der Menatwai-Insulaner.* B., 1902.

82*a* MAAS, A. "Durch Zentral-Sumatra," *Zeits. f. Ethn.*, 41:143–66.

83 MCFARLANE, S. *Among the Cannibals of New Guinea.* Ph., 1889.

*83*a* MAHLER, R. "Siedelungsgebiet und Siedelungslage in Oceanien," *Internat. Arch. f. Ethnog.*, 11:*Sup.* 1–72.
[Important for Part I.]

*84 MAN, E. H. "On the Aboriginal Inhabitants of the Andaman Islands," *Jl. Anth. Inst.*, 12:69–116, 117–75, 327–434; 14:253–72.
[The best report. Reprinted in a small volume by Trübner.]

*85 MAN, E. H. "The Nicobar Islanders," *Jl. Anth. Inst.*, 15:428–50; 18:354–93.

86 MANUWIRI, TE. *Sketches of Early Colonisation in New Zealand, and Its Phases of Contact with the Maori Race.* Christchurch, N. Z., and L. [No date; 1900 or later.]

87 MARINER, W. *An Account of the Natives of the Tonga Islands.* L., 1817.

88 MARKHAM, C. R. "Progress of Discovery on the Coasts of New Guinea," *Roy. Geog. Soc., Sup. Papers*, 1:265–337.

*89 MARTIN, R. *Die Inlandstämme der Malayischen Halbinsel.* Jena, 1905.
[A great monograph. Contains a much-needed criticism of the work of H. V. Stevens.]

*90 MARTIN, R. *Reisen in den Molukken.* . . . . Ley., 1894.

91 MASON, J. E. "On the Natives of Fiji," *Jl. Anth. Inst.*, 16:217–20.

*92 MEYER, A. B., UND SCHADENBURG, A. "Die Philippinen," *Dresden K. Zool. u. Anth.-Ethnog. Mus., Abhandl.*, 8 and 9.
[Two chapters of vol. 9 are translated with the title: A. B. Meyer, *Distribution of the Negritos in the Philippine Islands and Elsewhere*, Dresden (Stengel), 1899. The untranslated chapters are of particular interest.]

93 MEYER, A. B. *Album von Philippinen-Typen.* Dresden, 1885–1904. 3 vols.

94 MEYER, A. B. *Album von Celébes-Typen.* Dresden, 1889.

95 MEYER, A. B. *Album von Papua-Typen.* Dresden, 1894–1900.

96 MEYER, A. B., UND PARKINSON, R. *Album von Papua-Typen.* Dresden, 1900.

97 MILLER, E. Y. "The Bataks of Palawan," *Bur. of Sci. Div. of Ethn., Pub.* (Manila), 2:183–89.

98 MORGA, A. DE. *Philippine Islands, Moluccas, Siam, Cambodia, Japan, and China at the Close of the 16th Century.* L., 1868. (*Hakluyt Society*, 39.)

*99 MOSELY, H. N. "On the Inhabitants of the Admiralty Islands," *Jl. Anth. Inst.*, 6:379–420.

100 MULLENS, J. "On the Origin and Progress of the People of Madagascar," *Jl. Anth. Inst.*, 5:181–96.

*101 NICHOLLS, J. H. KERRY-. "The Origin, Physical Characteristics, and Manners and Customs of the Maori Race," *Jl. Anth. Inst.*, 15:187–208.

*102 NIEUWENHUIS, A. W. *Quer durch Borneo.* Ley., 1907.

*103 PARKINSON, R. *Dreissig Jahre in der Südsee.* Stutt., 1907.
[A work of first rate importance.]

*104 PARKINSON, R. "Zur Ethnographie der nordwestlichen Salomo Inseln," *Dresden K. Zöol. u. Anth.-Ethnog. Mus., Abhandl.*, 7, Pt. 6:1–35.

105 PENNEFATHER, F. W. "On the Natives of New Zealand," *Jl. Anth. Inst.*, 16:211–16.

*106 PEREZ, R. P. F. A. *Igorrotes.* Manila, 1902.
[Best account (in Spanish) from a Roman churchman.]

*107 PFEIL, J. *Studien u. Beobachtungen aus der Südsee.* Brauns., 1899.

108 PITCAIRN, W. D. *Two Years among the Savages of New Guinea.* L., 1891.

*108*a* PLEYTE, C. M. "Die Mentawei-Inseln und ihre Bewohner," *Globus*, 79:1–7, 24–32.

*109 PÖCH, R. "Einige bemerkenswerte Ethnologika aus Neu-Guinea," *Anth. Gesells. in Wien, Mitth.*, 37:57–71, 125.

*110 PÖCH, R. "Reisen in Neu-Guinea in den Jahren 1904–1906," *Zeits. f. Ethn.*, 39:382–400.

[Pöch is a coming man. His shorter papers are: "Ethnographische Mitteilungen über die Kworafi," *Anth. Gesells. in Wien, Mitth.*, 38:25–33; "Eine Reise an der Nordküste von Britisch-Neu-Guinea,' *Globus*, 92:277–83; "Wanderungen im nördlichen Teile von Süd-Neumecklenberg," *Globus*, 93:7–12; "Reisen an der Nordküste von Kaiser Wilhelmsland," *Globus*, 93:139–45, 149–55, 164–73.]

111 POLACK, J. S. *Manners and Customs of the New Zealanders.* L., 1840.

112 PRYER, W. B. "On the Natives of British North Borneo," *Jl. Anth. Inst.*, 16:229–36.

*113 RAFFLES, T. S. *The History of Java.* L., 1817.

*114 RATZEL, F. *History of Mankind*, 1:145–330, 391–486.

*115 REED, W. A. "Negritos of Zambales," *Bur. of Sci., Div. of Ethn., Pub.* (Manila), 2: Pt. 1, 1–90.

116 REEVES, W. P. *The Long White Cloud.* [N. Zealand.] L., 1898.

117 RIBBE, C. *Zwei Jahre unter den Kannibalen der Salomo-Inseln.* Dresden, 1903.

*118 RICHTER, O. "Unsere gegenwärtige Kenntniss der Ethnographie von Celebes," *Globus*, 88:154–58, 171–75, 191–95.

118*a* RIVERS, A. LANE-FOX PITT-. "Observations on Mr. Man's Collection of Andamanese Objects," *Jl. Anth. Inst.*, 7:434–51.

*119 ROSENBERG, H. v. *Der Malayische Archipel.* Lpz., 1878.

*120 ROTH, H. L. *The Natives of Sarawak and British North Borneo.* L., 1896.
[A valuable compilation.]

*121 ROTH, H. L. "Low's Natives of Borneo," *Jl. Anth. Inst.*, 21:110–34; 22:22–63.

*122 RÜTMEYER, L. "Die Nigalaweddas in Ceylon," *Globus*, 83:201–7, 220–23, 261–67.

*123 SALEEBY, N. M. "Studies in Moro History, Law, and Religion," *Bur. Sci., Div. of Ethn., Pub.* (Manila), 4:8–107.

*124 SALEEBY, N. M. "The History of Sulu," *Bur. of Sci., Div. of Ethn., Pub.* (Manila), 4:121–391.

*125 SANDE, G. A. J. VAN DER. *Ethnography and Anthropology* [of New Guinea]. Ley., 1907.
[Comment in Bibliography 14:89.]

*126 SARASIN, P., UND F. *Die Weddas von Ceylon und die umgebenden Völkerschaften.* Wiesbaden, 1893.
[The most noted work on the Veddas. Comment in Bibliography 14:90.]

*127 SARASIN, P. UND F. *Reisen in Celebes.* Wiesbaden, 1905.

*128 SARASIN, P. UND F. *Versuch einer Anthropologie der Insel Celebes. Erster Teil.* Weisbaden, 1906.

*128*a* SARASIN, P. UND F. *Ergebnisse naturwissenschaftlicher Forschungen auf Ceylon.* Wiesbaden, 1908.

129 SCHADENBERG, A. "Beiträge zur Ethnographie von Nord-Luzon," *Anth. Gesells. in Wien, Mitth.*, 18:265–71.

129*a* SCHADENBERG, A. "Die Bewohner von Süd-Mindanao und der Insel Samal," *Zeits. f. Ethn.*, 17:8–37.

130 SCHNEE, H. *Bilder aus der Südsee. Unter den kannibalischen Stämmen des Bismark-Archipels.* B., 1904.

131 SIBREE, J. *The Great African Island. Chapters on Madagascar.* L., 1880.

132 SMITH, P. *Niuè-fekai (or Savage) Island and Its People.* Wellington, 1903. (Reprinted from the *Jl. of the Polynesian Soc.*, vols. 11 and 12.)

133 SMITH, S. P. *Hawaiki; the Original Home of the Maori.* Christchurch, N. Z., and L., 1904.

[Theories negligible, but materials on Maori traditions of value.]

*134 SKEAT, W. W., AND BLAGDEN, C. O. *Pagan Races of the Malay Peninsula.* L., 1906.

[The best general work on this region.]

135 SOMERVILLE, B. T. "Notes on Some Islands of the New Hebrides," *Jl. Anth. Inst.*, 23:2–21.

136 SOMERVILLE, B. T. "Ethnological Notes on New Hebrides," *Jl. Anth. Inst.*, 23:363–95.

137 SOMERVILLE, B. T. "Ethnographical Notes in New Georgia, Solomon Islands," *Jl. Anth. Inst.*, 26:357–412.

138 SPENCER, H. *Descriptive Sociology*, 3.

*139 STEPMAN, E., UND GRAEBNER, F. *Neu-Mecklenburg (Bismarck-Archipel).* . . . . B., 1907.

*139*a* SVOBADA, W. "Die Bewohner des Nikobaren-Archipels," *Internat. Arch. f. Ethnog.*, 5:149–68, 185–214; 6:1–34.

*140 TAYLOR, R. *Te Ika A Maui; New Zealand and its Inhabitants.* L., 1870.

*140*a* THILENIUS, G. "Ethnographische Ergebnisse aus Melanesien," *Kais. Leop.-Carol.-Deutschen Akademie der Naturforscher, Abhandl. (Nova Acta)*, 80:3–364.

[Of great importance.]

*141 THOMSON, B. C. *Savage Island: An Account of a Sojourn in Niué and Tonga.* L., 1902.

143 TREGEAR, E. *The Maori Race.* Wanganui, N. Z., 1904.

144 TREGEAR, E. "The Maoris of New Zealand," *Jl. Anth. Inst.*, 19:97–123.

145 TURNER, G. *Nineteen Years in Polynesia.* L., 1861.

146 TURNER, G. *Samoa.* L., 1884.

147 TURNER, W. Y. "The Ethnology of the Motu," *Jl. Anth. Inst.*, 7:470–98.

148 VENTURILLO, M. H. "The 'Batacs' of the Island of Palawan," *Internat. Arch. f. Ethnog.*, 18:137–44.

149 VIRCHOW, RUDOLF. "The Peopling of the Philippines" (tr., with notes, by O. A. Mason), *Smithsonian Inst., Rep.* for 1899:509–26.

*150 WAITZ, T. [AND GERLAND G.]. *Anthropologie der Naturvölker*, 5:Pt. 1, 1–194; Pt. 2, 1–230; 6:1–705.

*153 WARNECK, J. *Die Religion der Batak. Ein Paradigma für animistische Religionen des indischen Archipels.* Lpz., 1909.

[Comment in Bibliography 14:32.]

*154 WEULE, K. "Zwergvölker in Neu-Guinea?" *Globus*, 82:247–53.

155 WHITMEE, S. J. "Characteristics of the Malayo-Polynesians," *Jl. Anth. Inst.*, 7:372–77.

*156 WILLIAMS, T., AND CALVERT, J. *Fiji and the Fijians.* N. Y., 1859.

157 WILSON, J. A. *The Story of Te Waharoe. Chapters in New Zealand History.* Christchurch, N. Z. [1907].

*158 WORCESTER, D. C. "The Non-Christian Tribes of Northern Luzon," *Philippine Jl. of Sci.*, 1:791–875.

159 WORCESTER, D. C. *The Philippine Islands and Their People.* N. Y., 1898. [Good popular description.]

160 YATE, W. *An Account of New Zealand.* L., 1835.

*161 ZÖLLER, H. *Deutsch-Neuguinea.* Stutt. and Lpz., 1891.

[The following bibliography is published by the Library of Congress: *A List of Books (with references to periodicals) on the Philippine Islands*, by A. P. C. GRIFFIN AND P. L. PHILLIPS, 1903. 397 pp. The *Internationales Archiv für Ethnographie* is rich in materials on this region, particularly on the Dutch possessions, and this journal is incompletely represented by the references given above. The *Journal of the Polynesian Society* should be examined, particularly for materials on New Zealand.]

BIBLIOGRAPHY 12

ASIA AND JAPAN

*1 AHLQVIST, A. "Unter Wogulen und Ostjaken," *Finska Vetenskaps-Societeten, Acta* [*Acta Societatis Scientarum Fennicae*], 14:130–307.

*2 BÄLZ, E. "Prehistoric Japan," *Smiths. Inst., Rep.* for 1907:523–47.

*3 BÄLZ, E. "Menschenrassen Ost-Asiens mit spezieller Rücksicht auf Japan," *Berlin Anth. Gesells., Abhandl.*, 33:166–89.

[Also, "Ueber die Rassenelemente in Ostasien, speziell in Japan," *Deutsche Gesells. f. Natur- und Völkerkunde Ostasiens, Mitth.*, 8:227–35.]

4 BALL, J. D. *Things Chinese.* L., 1904.

*5 BATCHELOR, J. *The Ainu of Japan.* L., 1892.

*6 BATCHELOR, J. *The Ainu and Their Folk-Lore.* L., 1901.

*7 BENNEVILLE, J. S. DE. *More Japonico.* (Japan Gazette Press.) Yokohama, 1908. [The most interesting book on modern social Japan.

8 BISHOP, I. L. B. *Among the Thibetans.* N. Y., 1894.

9 BISHOP, I. L. B. *Korea and Her Neighbours.* N. Y., 1898.

10 BLUNT, A. *Bedouin Tribes of the Euphrates.* L., 1879.

*11 BOGORAS, W. "The Chukchee," *Am. Mus. Nat. Hist., Mem.*, 7:1–733.

[This and the monograph of Jochelson below are careful, exhaustive, and intensive studies. Bogoras has also an excellent brief paper: "The Chukchi of Northeastern Asia," *Am. Anth.*, N. S., 3:80–108.]

13 BREEKS, J. W. *An Account of the Primitive Tribes and Monuments of the Nilagiris.* L., 1873.

*14 BRINKLEY, F. *Japan, Its History, Arts, and Literature.* Bost. and Tokyo, 1902.

*15 BRINKLEY, F. *China: Its History, Arts, and Literature.* Bost. and Tokyo, 1902.

*16 BURCKHARDT, J. L. *Notes on the Bedouins and Wahâbys.* L., 1831.

*17 BURCKHARDT, J. L. *Travels in Arabia.* L., 1829. 2 vols.

18 CALDWELL, R. *The Tinnevelly Shanars.* Madras, 1849.

19 CAREY, B. S., AND TUCK, H. N. *The Chin Hills.* Rangoon, 1896.

*20 CHAMBERLAIN, B. H. *Things Japanese.* L., 1902.

21 COLEMAN, F. M. *Typical Pictures of Indian Natives.* Bombay, 1899.
*22 CROOKE, W. *The Tribes and Castes of the Northwestern Provinces and Oudh.* Calcutta, 1896.
23 CROOKE, W. *The Natives of Northern India.* L., 1907.
[Good popular account.]
24 CROOKE, W. *The Northwestern Provinces of India.* L., 1897.
*25 CROOKE, W. "The Hill Tribes of the Central Indian Hills," *Jl. Anth. Inst.* 28:220–48.
*26 DALTON, E. T. *Descriptive Ethnology of Bengal.* Calcutta, 1872.
*27 DAMES, M. L. *The Baloch Race.* L., 1904.
*28 DAS, S. C. *A Journey to Lhasa and Central Tibet* (ed. Rockhill). L., 1902.
*29 DOUGHTY, C. M. *Travels in Arabia Deserta.* Camb., 1888.
*30 DUBOIS, J. A., AND BEAUCHAMP, H. K. *Hindu Manners, Customs, and Ceremonies.* Oxf., 1906.
[An excellent, intimate account in one vol.]
31 ELLIOTT, H. M. *Memoirs on the History, Folk-lore, and Distribution of the Races of the North Western Provinces of India.* L., 1869.
31*a* FISCHER, A. "Erfahrungen auf dem Gebiete der Kunst und sonstige Beobachtungen in Ostasien," *Zeits. f. Ethn.*, 41:1–21.
32 FUTTERER, K. *Durch Asien: Erfahrungen, Forschungen und Sammlungen.* 1. *Geographische Charakter-Bilder.* B., 1901.
*33 FUTTERER, K. "Land und Leute in Nordost Tibet," *Berlin Gesells. f. Erdkunde, Zeits.*, 35:297–341.
*34 GEIGER, W. *Civilization of Eastern Iran in Ancient Times.* (Tr.) L., 1886.
35 GILMOUR, J. *Among the Mongols.* L., 1888.
*36 GIRARD, H. "Les tribus sauvages du Haut-Tonquin: Mans et Méos," *Bul. de geog. hist. et desc.*, 3:421–97.
*37 GODDEN, G. M. "Naga and Other Frontier Tribes of North East India," *Jl. Anth. Inst.*, 26:161–201; 27:2–51.
*38 GRIFFIS, W. E. *Corea: the Hermit Nation.* N. Y., 1907.
39 GRIFFIS, W. E. *The Japanese Nation in Evolution.* N. Y., 1908.
*40 GRIFFIS, W. E. *The Mikado's Empire.* 11th ed. N. Y., 1906.
41 GUBBINS, J. H. "Hideyoshi and the Satsuma Clan in the Sixteenth Century," *Asiat. Soc. of Japan, Trans.*, 8:92–143.
*42 GULICK, S. L. *Evolution of the Japanese, Social and Psychic.* N. Y., 1903.
43 HAMY, E. T. "The Yellow Races," *Smithsonian Inst., Rep.* for 1895: 505–17. (Tr. from *L'anth.*, 6:241–56.)
44 HARKNESS, H. *Description of a Singular Aboriginal Race Inhabiting the Neilgherry Hills.* L., 1832.
45 HAXTHAUSEN, A. v. *Transcaucasia.* (Tr.) L., 1854.
46 HEDIN, S. *Through Asia.* N. Y., 1899.
47 HEDIN, S. *Central Asia and Tibet towards the Holy City of Lassa.* N. Y., 1903.
48 HEWITT, J. F. K. *The Ruling Races of Prehistoric Times in India, Southwestern Asia, and Southern Europe.* Westminster, 1895.
*49 HIEKISCH, C. *Die Tungusen.* St. P., 1879.

*50 HITCHCOCK, R. "The Ainos of Yezo, Japan," *U. S. Nat. Mus., Rep.* for 1890:429–502.

51 HOLDICH, T. H. "Swatis and Afridis," *Jl. Anth. Inst.*, 29:2–9.

52 HOLDICH, T. H. "The Arab Tribes of Our Indian Frontier," *Jl. Anth. Inst.*, 29:10–20.

53 HUC, E. R. *A Journey through the Chinese Empire.* (Tr.) N. Y., 1855.

54 JACKSON, F. G. "Notes on the Samoyads of the Great Tundra" (Coll. from the Jls. of F. G. J. by A. Montefiore), *Jl. Anth. Inst.*, 24:388–410.

55 JACOB, G. *Das Leben der vorislâmischen Beduinen.* B., 1895.

*56 JACOB, G. "Oriental Elements of Culture in the Occident" (Tr.), *Smiths. Inst., Rep.* for 1902:509–29.

56*a* JAGOR, F. "Berichte über verschiedene Völkerstämme in Vorderindien," *Zeits. f. Ethn.*, 26:61–93.

*57 JOCHELSON, W. "The Koryak," *Am. Mus. of Nat. Hist., Mem.*, 10:1–811.

58 KATE, H. TEN. "Notes détachées sur les Japonais," *Soc. d'Anth. de Paris, Bul.*, 5 sér., 9:178–95.

[See Bibliography 2:13, 109, 110.]

*59 KEANE, A. H. *Ethnology,* "Homo Mongolicus," 295–333.

*60 KEANE, A. H. *Man Past and Present,* "The Southern Mongols," 169–227; "The Northern Mongols," 265–348.

61 KEANE, A. H. "The Lapps," *Jl. Anth. Inst.*, 15:213–35.

*62 KOGANEI. *Ueber die Urbewohner von Japan.* Tokyo, 1903. (Reprint from *Deut. Gesells. f. Natur- u. Völkerkunde Ostasiens, Mitth.*, 9:297–329.)

[Contains extensive bibliography, with special reference to Japanese publications, with some analysis of papers published in the Japanese language. Reprinted in *Globus*, 84:101–6, 116–23.]

63 KRASINSKI. *Cossacks of the Ukrain.* L., 1848.

*64 KRAUSS, F. *Das Geschlechtsleben im Glauben, Sitte und Brauch der Japaner.* Lpz., 1907.

*65 LAUFER, B. "Preliminary Notes on Explorations among the Amoor Tribes," *Am. Anth.*, N. S., 2:297–338.

*65*a* LAUFER, B. "Kunst und Kultur Chinas im Zeitalter der Han," *Globus*, 96:7–9, 21–24.

66 LEWIN, T. H. *Wild Races of Southeastern India.* L., 1870.

67 LLOYD, A. "Japanese Village Life," *Asiat. Soc. of Japan, Trans.*, 33:133–58.

68 LYALL, A. C. *Asiatic Studies.* L., 1882.

*69 LYMAN, B. S. "The Character of the Japanese," *Jl. Spec. Phil.*, 19:133–72.

*70 MACRITCHIE, D. *The Ainos.* Ley., 1892.

[Also Sup. to *Internat. Archiv f. Ethnog.*, 4. Contains a good bibliography on the Ainos.]

71 MARSHALL, W. E. *A Phrenologist among the Todas.* London, 1873.

[Marshall's work is eclipsed by that of Rivers.]

*72 MARTIN, F. R. *Sibirica. Zur Kentniss der Vorgeschichte und Kultur Sibirischer Völker.* Stockholm, 1897.

*73 MUNRO, N. G. *Prehistoric Japan.* Yokohama, 1908.

[Best work on the subject. In part a compilation, utilizing also Japanese sources.]

*73*a* MUNRO, N. G. "Primitive Culture in Japan," *Asiat. Soc. of Japan, Trans.*, 34:1–198.

*74 MURDOCH, J., AND YAMAGATA, I. *A History of Japan (1542–1651)*. Kobe, 1903.
[Affords a vivid picture of Japanese historical, military, and social life, and is one of the most interesting books in existence.]

75 NITOBE, I. *Bushido, the Soul of Japan*. Tokyo, 1901.
[Popular, somewhat poetic representation of Japanese chivalry.]

75*a* PETERSON, E., UND LUSCHAN, F. v. *Reisen in Südwestlichen Kleinasien*. V., 1889.
[Von Luschan's "Anthropologische Studien" in vol. 2 is important.]

*76 POWELL, B. H. BADEN-. *The Indian Village Community*. L., 1896.

77 POWELL, B. H. BADEN-. *The Origin and Growth of Village Communities in India*. L., 1899.

*78 RATZEL, F. *History of Mankind*, 2:204–31; 3:149–79, 313–533.

*79 REIN, J. J. *Japan nach Reisen und Studien*. . . . . 2d ed. Lpz., 1905.
[Vol. 1 of the first ed. is translated as *Japan, Travels and Researches* (N. Y., 1888) and vol. 2, as *The Industries of Japan* (N. Y., 1889).]

*80 RISLEY, H. *The People of India*. Calcutta and L., 1908.
[Comment in Bibliography 14:90.]

*81 RIVERS, W. H. R. *The Todas*. L., 1906.
[One of the most important books in ethnology, and a model study.]

82 ROBERTSON, G. S. *The Kafirs of the Hindu-Kush*. L., 1896.

*83 ROCKHILL, W. W. *Diary of a Journey through Mongolia and Tibet in 1891–92*. Wash., 1894.

*84 ROCKHILL, W. W. *Tibet, the Land of the Lamas*. L., 1891.

*85 ROCKHILL, W. W. "Notes on the Ethnology of Tibet," *U. S. Nat. Mus., Rep.* for 1893: 665–747.

86 ROHRBACH, P. "Armenier und Kurden," *Berlin Gesellsch. f. Erdk., Verhandl.*, 27:128–33.

87 SCHRENCK, L. VON. *Reisen und Forschungen im Amurlande*. St. P. and Lpz., 1891.

*87*a* SCHWARTZ, W. "Mythologische Bezüge zwischen Semiten und Indogermanen," *Zeits. f. Ethn.*, 24:156–76.
[Of importance for Part VI.]

*88 SIEBOLD, P. F. *Nippon, Archiv zur Beschreibung von Japan*. . . . . Würtzburg, 1897.

*89 SMITH, W. ROBERTSON. *Kinship and Marriage in Early Arabia*. L., 1903.

90 SPENCER, H. Descriptive Sociology, Vol. V.

90*a* STENIN, P. v. "Die Kurden des Gouvernments Eriwan," *Globus*, 70:221–26.

*91 STENTZ, G. M. "Beiträge zur Volkskunde Süd-Schantungs," *Lpz. Städtisches Mus. f. Völkerkunde, Veröffent.*, 1:1–116.

*92 THURSTON, E. *Ethnographic Notes in Southern India*. Madras, 1906.
[Thurston's various government reports collected.]

93 VÁMBÉRY, A. *Travels and Adventures in Central Asia*. (Tr.) N. Y., 1863.

94 VÁMBÉRY, A. *Die primitive Cultur des Turko-Tatarischen Volkes*. Lpz., 1879.

95 VOLLAND, DR. "Beiträge zur Ethnographie der Bewohner von Armenien und Kurdistan," *Archiv f. Anth.*, 36:183–96.

*96 WADDELL, L. A. *Lhâsa and its Mysteries, with a Record of the Expedition of 1903–1904.* L., 1905.

*97 WEHRLI, H. "Ethnologie der Chingpaw (Kachin) von Ober-Burma," *Internat. Arch. f. Ethnog.*, 16:*Sup.* 1–71.

98 WESTON, W. "Customs and Superstitions in the Highlands of Central Japan," *Jl. Anth. Inst.*, 26:29–31.

*99 WILLIAMS, S. W. *The Middle Kingdom.* L., 1883.

[Good general history of China.]

*100 WOODTHORPE, R. G. "Notes on the Wild Tribes Inhabiting the So-called Naga Hills, on Our North East Frontier of India," *Jl. Anth. Inst.*, 11:56–72, 196–213.

*101 YOE, S. *The Burman: His Life and Notions.* L., 1896.

102 YOUNGHUSBAND, F. E. *The Heart of a Continent: Travels 1884–94.* L., 1896.

103 ZABOROWSKI, M. "La Chine et les Chinois," *Rev. Scientifique*, 15:161–70.

BIBLIOGRAPHY 13

EUROPE

*1 AUERBACH, B. *Les races et les nationalités en Autriche-Hongrie.* P., 1898.

*2 AUERBACH, E. "Die jüdische Rassenfrage," *Arch. f. Rassen u. Gesellschafts Biologie*, 4:332–61.

[This paper and von Luschan's reply: "Offener Brief an Herrn Dr. Elias Auerbach," *ibid.*, 362–73, are important on the question of the race mixture of the Jews. But the Jewish question in general is not included in this bibliography.]

2*a* BEHLEN, H. "Der diluviale (pälolithische) Mensch in Europa," *Anth. Gesells. in Wien, Mitth.*, 37:1–17, 72–84.

[An excellent critical review of the literature and theories up to 1906.]

3 BUSHNELL, D. I. "Early Man in Western Switzerland," *Am. Anth.*, N. S., 8:1–12.

4 CARTAILHAC, E. *Les âges préhistoriques de l'Espagne et du Portugal.* P., 1886.

*5 CARTAILHAC, E. *La France préhistorique.* 2d ed. P., 1896.

6 DAWKINS, W. B. *Cave-hunting, Researches on the Evidence of Caves Respecting the Early Inhabitants of Europe.* L., 1874.

*7 DAWKINS, W. B. *Early Man in Britain.* L., 1880.

*8 DÉCHELETTE, J. *Manuel archéologique, préhistorique, Celtique et Gallo-Romaine.* P., 1908.

9 DENIKER, J. "Les races européens," *L'anth.*, 9:113–33.

*10 DENIKER, J. "Les six races composant la population actuelle de l'Europe," *Jl. Anth. Inst.*, 34:181–206.

11 DOIGNEAU, A. *Notes d'archéologie primitive.* P., 1905.

12 DOIGNEAU, A. *Nos ancêtres primitifs.* P., 1905.

[This and the preceding are popular but good.]

*13 DREYER, W. "The Main Features of the Advance in the Study of Danish Archeology," *Am. Anth.*, N. S., 10:505–30.

*14 ENGERRAND, J. *Six leçons de préhistoire.* Br., 1905.

[Popular presentation of the views of Rutot and others, who, in opposition to Hoernes, Boule and others, hold that eoliths were made by man. With notes serving as bibliography.]

*15 FISHBERG, M. "Materials for the Physical Anthropology of the Eastern European Jews," *Am. Anth. Assoc., Mem.*, 1:1–146.
[One of Fishberg's numerous and important papers on the Jew.]

16 GOMME, G. L. *Ethnology in Folk-Lore.* L., 1892.

17 GOMME, G. L. *Folk-Lore as an Historical Science.* L., 1907.

*18 HEHN, V. *De Moribus Ruthenorum: Zur Characteristik der russischen Volksseele.* Stutt., 1892.

*19 HOERNES, M. *Die Urgeschite des Menschen.* . . . . V., 1892.
[Probably remains the best book on European prehistorics. Hoernes' *Primitive Man* (L., 1900; 11) is unfortunately of no great value.]

*20 HOERNES, M. *Der diluviale Mensch in Europa.* Brauns., 1903.

*21 HOERNES, M. *Urgeschichte der bildenden Kunst in Europa, von den Anfängen bis zum 500 vor Chr.* V., 1898.

*22 HOLMES, T. RICE-. *Ancient Britain and the Invasions of Julius Caesar.* Oxf., 1907.

23 JOYCE, P. W. *A Social History of Ancient Ireland.* L., 1903.

*24 KEANE, A. H. *Ethnology*, "Homo Caucasicus," 374–420.

*25 KEANE, A. H. *Man Past and Present*, "The Caucasic Peoples," 441–564.

*26 KLAATSCH, H. "Die neuesten Ergebnisse der Paläontologie des Menschen . . . . ," *Zeits. f. Ethn.*, 41:537–84.

*27 KRAUSS, F. S. *Slavische Volkforschungen.* Lpz., 1908.
[Krauss is pre-eminent in South Slavonian folk-lore. This is the latest of his many works.]

*28 LARTET, E., AND CHRISTY, H. *Reliquiae Aquitanicae. Contributions to the Archaeology and Palaeontology of Perigord.* . . . . L., 1875.

29 LUBBOCK, J. *Prehistoric Times as Illustrated by Ancient Remains and the Manners and Customs of Modern Savages.* 5th ed. L., 1891.
[An old but important work.]

*30 MCCURDY, G. G. "Some Phases of Prehistoric Archaeology," *Am. Assn. Adv. Sci., Proc.*, 56:543–67.
[Read this and the paper by Dreyer first of all.]

*31 MCCURDY, G. G. "The Eolithic Problem: Evidences of a Rude Industry Ante-dating the Paleolithic," *Am. Anth.*, N. S., 7:425–79.
[Has a bibliography of 154 books and papers on the eolithic question.]

32 MCCURDY, G. G. "Eolithic and Paleolithic Man," *Am. Anth.*, N. S., 11:92–100.

32*a* *Manuel de recherches préhistoriques.* Published by the Société prehistorique de France. P., 1906.
[A very useful little book of instructions to investigators in prehistoric archaeology.]

33 MONTELIUS, O. *The Civilisation of Sweden in Heathen Times* (tr. Woods). N. Y., 1888.

*34 MONTELIUS, O. *Kulturgeschichte Schwedens von den ältesten Zeiten bis zum elften Jahrhundert nach Christus.* Lpz., 1906.

*35 MONTELIUS, O. *Die älteren Kulturperioden im Orient und in Europa.* Stock., 1903.
[Archaeological. Contains also an excellent introduction on method.]

*36 MONTELIUS, O. *La Civilisation primitive en Italie depuis l'introduction des métaux.* Stockholm and B., Pt. 1, 1895; Pt. 2, 1904.

*37 MONTELIUS, O. "On the Earliest Communications between Italy and Scandinavia," *Jl. Anth. Inst.*, 30:89–94.

*38 MORTILLET, G. ET A. *Le préhistorique. Origine et antiquité de l'homme* P., 1900.

[3d ed. Standard French work.]

*39 MUCH, M. "Vorgeschichtliche Nähr- und Nutzpflanzen Europas . . . . ," *Anth. Gesell. in Wien, Mitth.*, 38:195–227.

*40 MÜLLER, S. *Urgeschichte Europas* (tr. Jiriczek). Strass., 1905.

[Also a French tr., by Philipot, *L'Europe préhistorique*, P., 1907. The most important recent general attempt to interpret European prehistoric times. Attaches much importance to early Asiatic influence.]

41 MÜLLER, S. *Nordische Altertumskunde* (tr. Jiriczek). Strass., 1898.

*42 MUNRO, R. *Prehistoric Problems.* Edin., 1897.

[Contains an excellent discussion of *Pithecanthropus erectus Dubois*, or the "missing link," with a bibliography of the important literature on this find.]

43 NADAILLAC, J. F. A. DU P. DE. *Manners and Monuments of Prehistoric Peoples.* N. Y., 1892.

44 NILSSON, S. *The Primitive Inhabitants of Scandinavia.* (Tr.) L., 1868.

45 QUATREFAGES, A. DE. *Hommes fossiles et hommes sauvages.* P., 1884.

*46 RATZEL, F. *History of Mankind*, 2:204–31; 3:534–69.

47 REINHARDT, L. *Der Mensch zur Eiszeit in Europa und seine Kulturentwicklung bis zum Ende der Steinzeit.* München, 1906.

48 RHŶS, J., AND BRYNMOR-JONES, D. *The Welsh People.* L., 1900.

49 RHŶS, J. *Celtic Folklore: Welsh and Manx.* Oxf., 1901.

*50 RIPLEY, W. Z. *The Races of Europe: A Sociological Study.* N. Y., 1899.

[Comment in Bibliography 14:100.]

*51 RUTOT, A. *Coup d'œil sur l'état des connaissances relatives aux industries de la pierre.* Namur, 1904.

52 SCHRADER, O. *Sprachvergleichung und Urgeschichte.* 3d ed. Jena, 1907.

[A work in "linguistic paleontology" which has been the subject of much controversy between archaeologists and philologists. Schrader claims rightly that many things can be established by language which "remains" throw no light on. There is much of value in his materials, but his attempt to establish exactly by linguistic methods the original home of the "Indo-Germanic" people cannot be regarded as successful. The 3d ed. is an improvement on the 2d, which is translated into English as *Prehistoric Antiquities of the Aryan Peoples* (L. 1890). The Indo-Germanic or Aryan question is still largely in the region of conjecture, and visionary views prevail. Those interested should read HIRT, H., *Die Indogermanen, ihre Verbreitung, ihre Urheimat und ihre Kultur*, Strass., 1907. He is one of the opponents of Schrader.]

*53 SCHWALBE, G. *Studien zur Vorgeschichte des Menschen.* Stutt., 1906.

[228 pp. Special number of *Zeits. f. Morph. u. Anth.* Has also a *Vorgeschichte des Menschen* (52 pp.). Brauns., 1904.]

*54 SEEBOHM, F. *The English Village Community.* L., 1890.

55 SERGI, G. *The Mediterranean Race; A Study of the Origins of European Peoples.* L., 1901.

[The best presentation of the (unlikely) theory that the long-headed peoples of the south of Europe came from Africa.]

*56 STRAUSS, A. *Die Bulgaren. Ethnographische Studien.* Lpz., 1898.

57 VÁMBÉRY, A. *Das Türkenvolk.* Lpz., 1885.

58 VÁMBÉRY, A. *Der Ursprung der Magyaren.* Lpz., 1882.

59 VÁMBÉRY, A. *Hungary.* N. Y., 1898.

*60 VILLENEUVE, L. DE, VERNEAU, R., ET BOULE, M. *Les Grottes de Grimaldi* (Baoussé-Roussé). Monaco, 1906.

61 WINDLE, B. C. A. *Remains of the Prehistoric Age in England.* L., 1904.

*62 WLISLOCKI, H. *Aus dem inneren Leben der Zigeuner.* B., 1892.

BIBLIOGRAPHY 14

BOOKS RECOMMENDED FOR PURCHASE

This list of more recent works is offered with smaller libraries and individual purchasers in view. The divisions are numbered to correspond with the preceding bibliographies 1–13, except that the first division is added. America is relatively neglected because of the existence and accessibility of the periodicals mentioned in the Preface; Asia and Europe, for reasons mentioned on p. 874. It must be remembered also that, after all, books form the less important part of the literature of anthropology. I recognize the immorality of pronouncing so summary a judgment on books, but I believe that bibliographies are not much used unless annotated.

0. GENERAL

1 DENIKER, J. *The Races of Man: An Outline of Anthropology and Ethnography.* L.: Scott. N. Y.: Scribner, 1900. Pp. 611. $1.50.

[An excellent sketch, but the space is not sufficient.]

2 DUCKWORTH, W. L. H. *Morphology and Anthropology.* Camb.: University Press, 1904. Pp. 564. 15*s.*

[Strictly physical anthropology. Contains a good discussion of *Pithecanthropus erectus Dubois*, or the "missing link." See also Bibliography 13:42.]

3 GERLAND, G. *Atlas der Völkerkunde.* Gotha: J. Perthes, 1892. Pp. 15. 15 maps. M. 19.60.

4 KEANE, A. H. *Ethnology.* Camb.: University Press, 1901. Pp. 442. 10*s.* 6*d.*

[The titles of this and the following should have been reversed, if anything. Taken together they are the best small general work on ethnology. But they are doctrinaire. Keane often speaks of matters (especially the origin of man and the relation of races) as though they were settled, when they are not settled at all.]

5 KEANE, A. H. *Man Past and Present.* Camb.: University Press, 1899. Pp. 584. 12*s.*

6 RATZEL, F. *History of Mankind.* (Tr. Butler.) L. and N. Y.: Macmillan, 1898. Pp. 486, 562, 599. $12.

[The most important single work on ethnology, and worth the price. Well illustrated. Ratzel unfortunately does not give the sources for his statements, but he is a reliable person and his judgment is usually sound. This work, supplemented by the two volumes of Keane and the atlas of Gerland, forms a minimum basis of reference.]

7 SCHURTZ, H. *Urgeschichte der Kultur.* Lpz.: Bibliographisches Institut, 1900. Pp. 658. M. 17.

[A clear, scientific, and descriptive presentation of the beginnings of culture. Resembles Ratzel More recent than Lippert's great work, *Kulturgeschichte der Menschheit*, and superior in its greater objectivity.]

1. EXTERNAL ENVIRONMENT AND ECONOMICS

8 BÜCHER, K. *Die Entstehung der Volkswirtschaft.* Tr. by Wickett as *Industrial Evolution.* N. Y.: Holt, 1901. Pp. 393. $2.50.

[The translation is from the 3d ed. The 5th ed is noticeably enlarged. The 6th ed. (1908) has slight additions. This work is the first serious attempt to apply the data of ethnology to political economy. In connection with it should be read Vierkandt, A., "Die wirtschaftlichen Verhältnisse der Naturvölker," *Zeits. f. Socialwiss.*, 2:81-97, 175-85, and Lasch, R., "Die Arbeitsweise der Naturvölker" *Zeits. f. Socialwiss.*, 11:293-304; Somlo, F., *Der Güterverkehr in der Urgesellschaft (Instituts Solvay: notes et mémoires)*, Br. and Lpz., 1909, is announced.]

9 HAHN, E. *Die Haustiere und ihre Beziehungen zur Wirtschaft des Menschen.* Lpz.: Duncker und Humblot, 1896. Pp. 581. M. 11.

Except for the fact that it is untranslated, Hahn's book is more desirable than the celebrated *Kulturpflanzen und Haustiere* of Hehn. The latter is limited to Asia and Europe, and is based largely on classical philology. Hahn's smaller and later book, *Die Entstehung der wirtschaftlichen Arbeit* (Heidelberg, 1908, M. 2.50) is in much the same line as Mason's *Woman's Share in Primitive Culture*, verging also on the woman question. It adds nothing to Mason and is inaccurate in the data on primitive economic conditions in Australia. Keller, C., *Die Abstammung der ältesten Haustiere*, deals with the question from the zoölogical standpoint. MUCH, M., "Vorgeschichtliche Nähr- und Nutzpflanzen Europas," *Anth. Gesells. in Wien, Mitth.*, 38:195-227, and Stuhlmann F., *Beiträge zur Kulturgeschichte von Ost-Afrika* (see comment in Bibliography 9:190*a*) should be read on the plant side.]

10 SEMPLE, ELLEN C. *Influence of Geographic Environment: On the Basis of Ratzel's Anthropogeographie.* Bost.: Houghton, Mifflin. In press.

[Comment in Bibliography 1.

2. MIND

11 BARTELS, M. *Die Medizin der Naturvölker. Ethnologische Beiträge zur Urgeschichte der Medizin.* Lpz.: Grieben, 1893. Pp. 361. M. 11.

[Important for Parts II and VI.]

12 HOVORKA, O., UND KRONFELD, A. *Verglichende Volksmedizin.* Stutt.: Strecker und Schröder, 1908. Pp. 495, 960. M. 28.

[Important for Parts II and VI.]

13 STOLL, O. *Suggestion und Hypnotismus in der Völkerpsychologie.* Lpz.: Veit, 1904. Pp. 738. M. 16.

[Comment in Bibliography 2.]

14 VIERKANDT, A. *Naturvölker und Kulturvölker.* Lpz.: Duncker und Humblot, 1896. Pp. 497. M. 10.80.

[This and the following are the best systematic attempts to explain the mental retardation of savage and (incidentally) of oriental societies. Important as supplementary to Part II. A later work, F. Schultze, *Psychologie der Naturvölker* (Lpz., 1900) is not recommended. The author does not know the sources and lacks scientific standpoint. Vierkandt's recent paper, "Führende Individuen bei den Naturvölkern," *Zeits. f. Socialwiss.*, 11:342-53, 623-39, should be read. "Die Kulturtypen der Menschheit," *Arch. f. Anth.*, 25:61-75, contains a summary statement of Vierkandt's general position.]

15 VIERKANDT, A. *Die Stetigkeit im Kulturwandel.* B.: Reimer, 1909. Pp. 209. M. 5.

16 WUNDT, W. *Völkerpsychologie; eine Untersuchung der Entwicklungsgesetze von Sprache, Mythus und Sitte.* Lpz.: Engelmann, 1904-1909. (5 half-vols.) Pp. 667, 673, 617, 481, 792. M. 60.

[Altogether the most important attempt to apply psychology to the interpretation of early society, but in difficult German, and presupposing an intimate knowledge of psychology. At the same time it is not to be regarded as a work of permanent value, but as one introducing the psychological

method into this subject in much the same way that Herbert Spencer introduced the biological. Among the important reviews of this work are: Ehrenreich, P., in *Globus*, 70:21–23; Mead, G. H., in *Psych. Bul.*, 3:393–99; Weichsel, J., in *Psych. Bul.*, 5:120–23; Gardiner, H. N., in *Phil. Rev.*, 17:316–23; Hales, F. N., in *Mind*, N.S., 12:230–45; Hoffmann, O., in *Zeits. f. Socialwiss.*, 9:403–6; Goldstein, in *Globus*, 996:79–80. Lasch, R., "Ueber Sondersprachen und ihre Entstehung," *Anth. Gesells. in Wien., Mitth.*, 37:89–101, 140–62, should be read in connection with vol. 1, or independently.]

3. INVENTION

17 MASON, O. T. *The Origins of Invention: A Study of Industry among Primitive Peoples.* L.: Scott. N.Y.: Scribner, 1895. Pp. 419. $1.25.

18 RIVERS, A. LANE-FOX PITT-. *The Evolution of Culture.* Oxf.: Clarendon Press, 1906. Pp. 232. 7*s.* 6*d.* (Edited by Myers, with an introduction by Balfour.)

4. SEX AND MARRIAGE

19 CRAWLEY, E. *The Mystic Rose; a Study of Primitive Marriage.* N.Y.: Macmillan, 1902. Pp. 492. $4.

[Comment on p. 534.]

20 MASON, O. T. *Woman's Share in Primitive Culture.* N.Y.: Appleton, 1894. Pp. 295. $1.75.

[Best description of woman's relation to the activities of early society.]

21 PLOSS, H. H., UND BARTELS, M. *Das Weib in der Natur- und Völkerkunde.* 9th ed. Lpz.: Grieben, 1908. Pp. 986, 884. M. 30.

[This continuation by Bartels of Ploss's work is the greatest collection of ethnological data on woman.]

22 WESTERMARCK, E. *History of Human Marriage.* 3d ed. N.Y.: Macmillan, 1901. Pp. 644. $4.50.

[No important changes from the first edition. Westermarck's reply to his critics ("Neueres über die Ehe,") will be found in *Zeits. f. Socialwiss.*, 11:553–59.]

5. ART, ORNAMENT, DECORATION

23 BÜCHER, K. *Arbeit und Rhythmus.* 4th ed. Lpz.: Teubner, 1909. Pp. 476. M. 7.

[Comment in Bibliography 5.]

24 GROSSE, E. *The Beginnings of Art.* (Tr. of *Die Anfänge der Kunst.*) N.Y.: Appleton, 1897. Pp. 327. $1.75.

25 HADDON, A.C. *Evolution in Art, as Illustrated by the Life-Histories of Designs.* L.: Scott. N.Y.: Scribner, 1895. Pp. 364. $1.25.

26 HIRN, Y. *The Origins of Art; a Psychological and Sociological Inquiry.* N.Y.: Macmillan, 1900. Pp. 331. $3.25.

[Comment in Bibliography 5.]

27 WALLASCHEK, R. *Primitive Music. An Inquiry into the Origin and Development of Music, Songs, Instruments, Dances and Pantomimes of Savage Races.* L. and N.Y.: Longmans, 1893. Pp. 326. $4.50.

6. MAGIC, RELIGION, MYTH

28 FRAZER, J. G. *The Golden Bough: A Study in Magic and Religion.* L. and N.Y.: Macmillan, 1900. Pp. 467, 471, 490. $10.

[A 3d ed. is in press, well advanced, and the parts can be had as they appear.]

29 LEONARD, A. G. *The Lower Niger and Its Tribes.* L. and N.Y.: Macmillan, 1906. Pp. 564. $4.

[On African religion.]

30 SKEAT, W. W. *Malay Magic, Being an Introduction to the Folklore and Popular Religion of the Malay Peninsula.* L. and N.Y.: Macmillan, 1900. Pp. 685. $6.50.

31 TYLOR, E. B. *Primitive Culture; Researches into the Development of Mythology, Philosophy, Religion, Language, Art and Custom.* 4th ed. London: J. Murray, 1903. 2 vols. Pp. 994. 21*s.*

[No important changes from earlier editions.]

32 WARNECK, J. *Die Religion der Batak. Ein Paradigma für animistische Religionen des Indischen Archipels.* Lpz.: Dieterich, 1909. Pp. 136. M. 4.

[Important for Part VI. Forms first vol. of fourth section ("Die Naturvölker und die Kulturarmen Völker") of *Religionsurkunden der Völker*, edited by J. Böhmer.]

7. SOCIAL ORGANIZATION, MORALITY, THE STATE

33 NIEBOER, H. J. *Slavery as an Industrial System.* The Hague: Nijhoff, 1900. Pp. 474. Fl. 7.50.

[A comparative study of slavery among savage and barbarous peoples. A unique work of great importance.]

34 SCHURTZ, H. *Altersklassen und Männerbünde.* B.: Reimer, 1902. Pp. 458. M. 8.

[A highly important work on early social organization, somewhat resembling Webster's *Primitive Secret Societies.*]

35 STEINMETZ, S. R. *Ethnologische Studien zur ersten Entwicklung der Strafe, nebst einer psychologischen Abhandlung über Grausamkeit und Rachsucht.* Ley.: Van Doesburgh, 1894. Pp. 486, 425. M. 20.

[Comment in Bibliography 7.]

36 STEINMETZ, S. R. *Rechtsverhältnisse von eingeborenen Völkern in Africa und Ozeanien.* B.: Pringer, 1903. Pp. 455. M. 10.

37 SUMNER, W. G. *Folkways: a Study of the Sociological Importance of Usages, Manners, Customs, Mores, and Morals.* Bost.: Ginn, 1907. Pp. 692. $3.00.

[Comment in Bibliography 7.]

38 WEBSTER, H. *Primitive Secret Societies: a Study in Early Politics and Religion.* N.Y.: Macmillan, 1908. Pp. 227. $2.

39 WESTERMARCK, E. *The Origin and Development of the Moral Ideas.* N.Y.: Macmillan, 1908. Pp. 716, 852. $7.

[After Ratzel, perhaps the most important work to purchase, because of the wealth of material rather than for theory. See, however, my comment on p. 857.]

8. AMERICA

40 FARRAND, L. *Basis of American History, 1500–1900.* (Vol. 2 of Hart, *The American Nation.*) N.Y.: Harper, 1904. Pp. 303. $2.

41 SCHMIDT, M. *Indianer-Studien in Zentralbrasilien.* B.: Reimer, 1905. Pp. 456. M. 10.

42 STEINEN, K. VON DEN. *Unter den Naturvölkern Zentral-Brasiliens. Reiseschilderung und Ergebnisse der 2. Schingú-Expedition, 1887–1888.* B.: Reimer, 1894. Pp. 570. M. 12.

[A work famous among specialists; the best on South America.]

43 THURN, E. F. IM. *Among the Indians of Guiana.* L.: Kegan Paul, Trench, 1883. Pp. 445. 18*s.*

9. AFRICA

44 CUNNINGHAM, J. F. *Uganda and Its Peoples; Notes on the Protectorate of Uganda, Especially the Anthropology and Ethnology of Its Indigenous Races.* L.: Hutchinson, 1905. Pp. 370. 24*s.*

[Johnston's *Uganda Protectorate* (N.Y., 1904, $12.50) contains valuable material on that region, the two vols. being about equally divided between ethnology and natural history. But Cunningham's single volume is perhaps a better investment.]

45 ELLIS, A. B. *The Tshi-speaking Peoples of the Gold Coast of West Africa.* L.: Chapman and Hall, 1887. Pp. 343. 10*s.* 6*d.*

46 ELLIS, A. B. *The Ewe-speaking Peoples of the Slave Coast of West Africa.* L.: Chapman and Hall, 1890. Pp. 331. 10*s.* 6*d.*

47 ELLIS, A. B. *The Yoruba-speaking Peoples of the Slave Coast of West Africa.* L.: Chapman and Hall, 1894. Pp. 402. 10*s.* 6*d.*

48 FROBENIUS, L. *Ursprung der afrikanischen Kulturen.* B.: Borntraeger, 1898. Pp. 368. M. 10.

49 FÜLLEBORN, F. *Das deutsche Nyassa- und Ruwumagebiet: Land und Leute.* (*Deutsch Ost-Afrika*, vol. 9.) B.: Reimer, 1906. Pp. 1031. M. 60.

[Best general survey of East Africa, and an admirable work. Illustrated. There is also a separate atlas (not indispensable) of 119 photographs at M. 65.]

50 HOLLIS, A. C. *The Masai: Their Language and Folklore.* Oxf.: Clarendon Press, 1905. Pp. 359. 14*s.*

51 HOLLIS, A.C. *The Nandi: Their Language and Folklore.* Oxf.: Clarendon Press, 1909. Pp. 328. 16*s.*

52 JOHNSTON, H. H. *George Grenfell and the Congo; a History and Description of the Congo Independent State and Adjoining Districts of Congoland, Together with Some Account of the Native Peoples and Their Languages, the Fauna and Flora; and Similar Notes on the Cameroons and the Island of Fernando Pô.* L.: Hutchinson, 1908. Pp. 496, 497–990. 30*s.*

53 JOHNSTON, H. H. *Liberia.* N.Y.: Dodd, Mead, 1906. Pp. 519, 521–1183. $12.50.

54 JUNKER, W. *Travels in Africa during the Years 1875–1886.* (Tr. Keane.) L.: Chapman and Hall, 1890–92. Pp. 582, 477, 586. 21*s.*

55 KIDD, D. *The Essential Kaffir.* L. and N.Y.: Macmillan, 1904. Pp. 436. $6.

56 OVERBERGH, C. VAN. *Les Bangala.* Br.: De Wit, 1907. Pp. 458. Fr. 10.

57 OVERBERGH, C. VAN. *Les Mayombe.* Br.: De Wit, 1907. Pp. 470. Fr. 10

58 OVERBERGH, C. VAN. *Les Basogne.* Br.: De Wit, 1908. Pp. 564. Fr. 10.

59 OVERBERGH, C. VAN. *Les Mangbetu.* Br., 1909. Pp. 594. Fr. 10.

[First vols. (on the Congo) of *Collection de monographies ethnographiques*, based on very full materials and to be extended to all countries. Very important, though the results are given in too summarized a form.]

60 PASSARGE, S. *Die Buschmänner der Kalahari.* B.: Reimer, 1907. Pp. 144. M. 3.

[Comment in Bibliography 9.]

61 PAULITSCHKE, P. *Ethnographie Nordost Afrikas. Die Materielle Kultur der Danâkil, Galla, und Somâl.* B.: Reimer, 1893. Pp. 338. M. 20.

62 PECHUËL-LOESCHE, E. *Volkskunde von Loango.* Stutt.: Strecker und Schröder, 1907. Pp. 482. M. 24.

[Perhaps the best monograph on any region of Africa, at least from the standpoint of this volume.]

63 SCHULTZE, L. *Aus Namaland und Kalahari.* Jena: G. Fischer, 1907. Pp. 752. M. 60.

[The anthropo-geographical data are unusually good, and the volume is a great monograph.]

64 THEAL, G. M. *History and Ethnography of Africa, South of the Zambesi before 1795.* L.: Sonnenschein, Vol. 1, 1907. Pp. 526. 7*s.* 6*d.*

[Two vols. are to follow. This is the 3d ed. of his *History of South Africa* . . . . , with the addition of "Ethnography" to the title.]

65 WEULE, K. *Wissenschaftliche Ergebnisse meiner ethnographischen Forschungsreise in den Südosten Deutsch-Ostafrikas.* B.: Mittler, 1908. M. 3. Tr. by Alice Werner as *Native Life in East Africa.* L.: Pitman, 1909. Pp. 466. 12*s.* 6*d.*

10. AUSTRALIA AND TASMANIA

66 HOWITT, A. H. *Native Tribes of South East Australia.* N.Y.: Macmillan, 1904. Pp. 818. $6.50.

[Comment in Bibliography 10.]

67 ROTH, H. L. AND BUTLER, M. E. *The Aborigines of Tasmania.* Halifax, Eng.: King, 1899. Pp. 228. $6.

68 ROTH, W. E. *Ethnological Studies among the North-West-Central Queensland Aborigines.* Brisbane: E. Gregory, Government Printer, 1897. Pp. 199. $6.

[Comment in Bibliography 10:64 and 65.]

69 SPENCER, B., AND GILLEN, F. J. *The Native Tribes of Central Australia.* N.Y.: Macmillan, 1899. Pp. 671. $6.50.

[If two books are bought on Australia they should perhaps be this and Howitt.]

70 SPENCER, B., AND GILLEN, F. J. *The Northern Tribes of Central Australia.* N.Y.: Macmillan, 1904. Pp. 784. $6.50.

71 STREHLOW, C. *Die Aranda- und Loritjastämme in Zentralaustralien.* Frankf.: Baer, Pt. 1 (1907). Pp. 104. M. 15. Pt. 2 (1908). Pp. 84. M. 10.

[Edited by Leonhardi, and issued as *Veröffentlichungen aus dem städtischen Völkermuseum, Frankfurt. a. M.* Strehlow is a missionary and his reports are important as supplementary to and corrective of those of Spencer and Gillen on the same region.]

11. OCEANIA AND THE MALAY ARCHIPELAGO

72 ANNANDALE, N., AND ROBINSON, H. C. *Fasciculi Malayenses Results of an Expedition to Perak and the Siamese Malay States.* L.: Longmans, 1904. 2 vols.

[Vol. 1: *Anthropology* (pp. 180+xliv) can be had separately at 15*s.* After Skeat and Blagden, the best English book to buy on this region.]

73 ATKINSON, F. W. *The Philippine Islands.* Bost.: Ginn, 1905. Pp. 426 $3.

[A good popular work.]

74 CODRINGTON, R. H. *The Melanesians: Studies in Their Anthropology and Folk-lore.* Oxf.: Clarendon Press, 1891. Pp. 419. 16*s.*

75 CHRISTIAN, F. W. *The Caroline Islands.* N. Y.: Scribner, 1899. Pp. 412. $4.

[Rather too much of the nature of travel.]

76 HADDON, A. C. *Head-hunters: Black, White, and Brown.* L.: Methuen, 1902. Pp. 426. 15*s.*

77 HAGEN, B. *Unter den Papuas. Beobachtungen und Studien über Land und Leute, Thier und Planzenwelt in Kaiser Wilhelmsland.* Wiesbaden: C. W. Kreidel, 1899. Pp. 327. M. 30.

78 HAGEN, B. *Die Orang Kubu auf Sumatra.* Frankf.: Baer, 1908. Pp. 269. M. 25.

79 HURGRONJE, S. *The Achehnese.* (Tr. O'Sullivan.) Ley.: Brill, 1906. Pp. 439, 384. 32*s.*

80 KRIEGER, M. *Neu Guinea.* (*Bibliothek der Länderkunde,* 5 and 6 [2 vols. in one].) B.: A. Schall, 1899. Pp. 535. M. 11.50.

[A good investment.]

81 KUBARY, J. S. *Ethnographische Beiträge zur Kenntnis des Karolinen Archipels.* Ley.: Trap (Lpz.: Winter), 1895. Pp. 307. Fl. 16.50.

[Not altogether up to date but the result of a long residence.]

82 KRÄMER, A. *Samoa-Inseln.* Stutt.: Schweizerbart, 1903. Pp. 509, 445. M. 36.

[Krämer is one of the many natural historians seduced by ethnology. An admirable monograph, and one of the celebrated German works. The price is modest in view of the size and merit of the work and the rich illustrations.]

83 KRÄMER, A. *Hawii, Ostmikronesien, und Samoa. . . . .* Stutt.: Strecker und Schröder, 1906. Pp. 585. M. 10.

[Not so admirable as the preceding, showing signs of rapid travel. Well illustrated, though not richly.]

84 MAN, E. H. *On the Aboriginal Inhabitants of the Andaman Islands.* L.: Trübner, 1885. Pp. 224. 10*s.* 6*d.*

[To be bought if the *Journal of the Anthropological Institute,* from which it is reprinted, is not on hand.]

85 MARTIN, R. *Die Inlandstämme der Malayischen Halbinsel.* Jena: Fischer, 1905. Pp. 1052. M. 60.

[One of the greatest of all German monographs. Richly illustrated.]

86 NIEUWENHUIS, A. W. *Quer durch Borneo. Ergebnisse seiner Reisen in 1894, 1896–7, 1898–1900.* Ley.: Brill, 1904–7. Pp. 493, 557. M. 42.

[A low price for a handsome and scientific work, well illustrated.]

87 PARKINSON, R. *Dreissig Jahre in der Südsee. Lande und Leute, Sitten und Gebräuche im Bismarckarchipel und auf den deutschen Salomoinseln.* Stutt.: Strecker und Schröder, 1907. Pp. 876. M. 16.

[A work which ethnologists regard with special affection, because of Parkinson's intimate knowledge.]

88 ROTH, H. L. *The Natives of Sarawak and British North Borneo.* L.: Truslove and Hanson, 1896. Pp. 496, 546. 50*s.*

[A compilation of great value.]

89 SANDE, G. A. J. VAN DER. *Ethnography and Anthropology* [of New Guinea] [Vol. 3 of *Nova Guinea,* the report of the Dutch Expedition of 1903]. Ley.: Brill, 1907. Pp. 390. $20.

[Fortunately printed in English, and one of the most attractive as well as important of all ethnological works. The price is regrettable, but there are 50 plates, 216 figures, and a map.]

90 SARASIN, P. UND F. *Die Weddas von Ceylon und die sie umgebenden Völkerschaften.* Wiesbaden: Kreidel, 1893. Pp. 599. M. 144.

[Two parts text and two parts plates, bound in 2 vols. The 84 plates are extraordinarily fine. One of the most intensive of all monographs, on one of the lowest human groups. The authors are primarily physical anthropologists, and this side is very strong. It is now recognized that the ethnological side was not so well done, though better done than anything before attempted on the Veddas.]

91 SARASIN, P. AND F. *Reisen in Celebes.* Wiesbaden: Kreidel, 1905. Pp. 381, 390. M. 24.

[In consideration of the price a better investment than the preceding for the ordinary library.]

92 SKEAT, W. W., AND BLAGDEN, C. O. *Pagan Races of the Malay Peninsula.* L. and N. Y.: Macmillan, 1906. Pp. 724, 855. $13.

[The best work to buy on this region. In part a compilation.]

93 TAYLOR, R. *Te Ika a Maui; or, New Zealand and Its Inhabitants.* 2d ed. L.: Macintosh, 1870. Pp. 730. 25*s.*

94 WORCESTER, D. C. *The Philippine Islands and Their People.* N. Y.: Macmillan, 1898. Pp. 529. $4.

[A good popular account.]

12. ASIA

95 CROOKE, W. *The Tribes and Castes of the North-Western Provinces and Oudh.* Calcutta: Office of the Supt. of Government Printing, 1896. Pp. ccxvi + 294, 499, 500, 516. $10.

96 DUBOIS, J. A., AND BEAUCHAMP, H. K. *Hindu Manners, Customs, and Ceremonies.* Oxf.: Clarendon Press, 1906. Pp. xxxiv + 741. 6*s.*

[New ed. of a standard work by an intimate observer.]

97 RIVERS, W. H. R. *The Todas.* L. and N. Y.: Macmillan, 1906. Pp. 755. $6.50.

[A model in ethnological method, and one of the most important of all monographs.]

90 RISLEY, H. H. *The People of India.* Calcutta: Thacker, Spink, 1908. Pp. 477 (25 plates). $7.50.

[*The Census of India*, 1901, vol. 1 (Calcutta, 1903), contains Risley's original paper on tribes and caste. Also reprinted in *The Indian Empire: Imperial Gazeteer of India* (Oxf., 1907), 1:283–348.]

13. EUROPE

99 HOERNES, M. *Die Urgeschichte des Menschen.* V.: Hartleben, 1892. Pp. 672. M. 13.50.

[Remains perhaps the standard work on European prehistoric times. See, however, the comment on Müller, Bibliography 13:40.]

100 RIPLEY, W. Z. *The Races of Europe.* N. Y.: Appleton, 1899. Pp. 624, 160. $5.

[The most important work on the relation and distribution of the European races. Appeared originally as "The Racial Geography of Europe," a series of papers in the *Popular Science Monthly* vol. 50 (1897). Associated with this work also is *A Selected Bibliography of the Anthropology and Ethnology of Europe*, published by the Trustees of the Boston Public Library (Appleton, 1899. Pp. 160. $1.00).]

INDEX OF NAMES IN BIBLIOGRAPHIES

Abbott, C. C., 440.
Achelis, T., 318, 736, 859.
Adair, J., 874.
Ahlqvist, A., 901.
Aimes, H. H. S., 883.
Albertis, L. M. d', 894.
Allen, H. A., 874.
Allen, J., 318.
Allen, W., and Thomson, T. R. H., 883.
Ammon, O., 859.
Andree, R., 318, 440, 636, 859.
Andrian-Werburg, F., 859.
Angas, G. F., 891.
Angell and Moore, 318.
Angell and Thompson, 636.
Angus, H. C., 535.
Ankermann, B., 883.
Annandale and Robinson, 894, 913.
Arbousset, T., and Daumas, F., 883.
Arnot, F. S., 883.
Ashmead, A., 318.
Aston, W. G., 318, 636.
Atkinson, F. W., 895, 913.
Atkinson, J. J., 859, 895.
Atwater, C., 874.
Auerbach, B., 905.
Auerbach, E., 905.
Avelot, R., 636.

Baas, J. H., 318.
Babelon, E., 318.
Baegert, J., 874.
Bailey, J., 895.
Baker, S. W., 883, 884.
Baker, W. B., 636.
Baldwin, J. D., 874.
Baldwin, J. M., 318.
Balfour, H., 440, 636.
Ball, J. D., 901.
Bälz, E., 318, 901.
Bancroft, N. H., 874.
Bandelier, A., 440, 859, 874.
Barrett, S. A., 134, 636.
Barrington, G., 891.
Barrows, D. P., 134.
Bartels, M., 318, 909.
Barth, H., 884.
Barth, P., 318.
Barthel, K., 884.
Barton, F. R., 636.
Bartram, W., 874.
Bastian, A., 318, 319, 884.
Batchelor, J., 901.
Bates, H. W., 874.
Baumann, O., 859, 884.
Beardmore, E., 895.
Beauchamp, W. M., 535, 859, 874.
Beck, L., 440.
Beckwith, H. W., 874.
Beckwith, P., 875.
Beddoe, J., 891.
Beecham, J., 884.
Béguin, E., 884.
Behlen, H., 905.
Bei, Mustafa, 535.
Bennett, A. L., 884.
Benneville, J. S. de, 901.
Bentley, W. H., 884.
Bertran, A., 134.
Best, E., 895.
Bevan, T. F., 895.
Biart, L., 875.
Binger, Capt., 884.
Bishop, I. L. B., 901.
Blair and Robertson, 895.
Bland, R. H., 891.
Bleek, W. H. I., 319.
Bloomfield, J. K., 875.
Bloxham, G. W., 319.
Blumentritt, F., 895.
Blunt, A., 901.
Boas, F., 143–55, 303–15, 319, 636, 737, 749, 859, 860, 873, 875.
Boas and Hunt, 737.
Bock, C., 895.
Boehmer, G. H., 440.
Bogoras, W., 737, 901.
Boman, E., 875.
Bonney, F., 891.
Bonwick, J., 891.
Bordeau, L., 134.
Bordier, A., 134, 319, 440.
Bos, P. R., 134.
Bosanquet, H., 535.
Bouche, P. B., 884.
Bourke, J. G., 440, 636, 737, 860.
Bowring, J., 895.
Boyle, D., 737.
Boyle, F., 895.
Brass, M., 637.
Breeks, J. W., 901.
Brett, W. H., 875.
Brigham, A. P., 134.
Brigham, W. T., 637.
Brinkley, F., 901.
Brinton, D. G., 319, 636, 737, 875.
Brooke, C., 895.
Brown, J. M., 895.
Brown, W., 895.
Browne, J., 891.
Bruce, J., 884.
Brühl, G., 875.
Brun, P., 884.
Brunner, F. G., 319.
Bryce, J., 319.
Bücher, K., 112–29, 134, 637, 909, 910.
Buckland, A. W., 134, 637, 737.
Buckley, E., 737.
Bülow, W. von, 319, 737 860, 895.
Bunce, D., 891.
Burckhardt, J. L., 901.
Burdon, J. A., 884.
Burrows, G., 884.
Burton, R. F., 884.
Buschan, G., 884.
Bushnell, D. I., 319, 905.
Buttel-Reepen, H. von, 319.

Caillié, R., 884.
Calder, J. E., 891.
Caldwell, R., 901.
Callaway, H., 738.
Calvert, A. F., 891.
Cameron, A. L. P., 891.
Cameron, V. L., 884.
Campbell, H., 535.
Campbell, J. M., 738.
Canfield, W., 738.
Capitan, L., 134.
Capus, G., 637.
Cardi, C. N. de, 860.
Carey and Tuck, 901.
Carlile, W. W., 319.
Carmichael, C. H. E., 892

Carr, L., 636.
Carr and Watson, 319.
Cartailhac, E., 905.
Carus, P., 738.
Carver, J., 875.
Casati, G., 884.
Catlin, G., 875.
Cator, D., 895.
Chalmers, J., 895.
Chamberlain, A. F., 320, 535, 738, 749, 875.
Chamberlain, B. H., 320, 637, 860, 895, 901.
Chamberlain, I. C., 749.
Champlain, S. de, 875.
Chapaux, A., 884.
Charlevoix, P. F. X., 875.
Charnay, D., 875.
Chatelain, H., 884.
Cheever, H., 895.
Christaller, J. G., 738.
Christian, D., 875.
Christian, F. W., 895, 914.
Christmann, F., 892.
Clarke, K. M., 738.
Clavigero, F., 876.
Clement, E., 892.
Clement, E. W., 860.
Closson, C. C., 134, 135.
Clozel, F. J., 884.
Clozel and Villamur, 884.
Coan, T. M., 895.
Codrington, R. H., 320, 440, 738, 860, 895, 914.
Cohen, H., 738.
Colden, C., 876.
Cole, F. C., 895.
Coleman, F. M., 902.
Colenso, W., 895.
Comrie, Dr., 895.
Conant, L. L., 320.
Conder, C. R., 885.
Connelly, W. E., 876.
Connolly, R. M., 860, 885.
Cook, Capt. J., 895.
Cooley, C. H., 320.
Copway, G., 876.
Coquilhat, C., 885.
Cotton, P. H. G. Powell-, 885.
Couty, L., 860.
Cowper, H. S., 440.
Craig, W., 135, 320.
Cranz, D., 876.
Crawfurd, J., 135, 885, 895.
Crawley, E., 512–29, 535, 738, 910.
Crooke, W., 738, 902, 915.
Crozet, 892.
Cruickshank, B., 885.
Cruikshank, E., 135.
Culin, S., 637.
Cunningham, D. J., 320.
Cunningham, J. F., 885, 912.
Cunow, H., 860, 892.
Cureau, A., 320.
Curr, E. M., 320, 892.
Cushing, F. H., 320, 440, 637, 738, 876.
Cusick, D., 876.

Dähnhardt, O., 320.
Dale, G., 885.
Dall, W. H., 638, 876.
Dalton, E. T., 902.
Dames, M. L., 638, 902.
Danks, B., 320, 535, 739.
Dannert, E., 860.
Dargun, L., 535.
Das, S. C., 902.
Dautremer, J., 860.
Davenport, F. M., 739.
Davids, T. W., 739.
Davis, E. J., 320.
Dawkins, W. B., 905.
Dawson, J., 892.
Déchelette, J., 905.
Deken, P. de, 885.
Del Mar, A., 320.
Deniken, J., 905, 908.
Dening, W., 321.
Dennett, R. E., 321, 739, 860, 885.
Densmore, F., 638.
Desplagnes, L., 885.
Dewey, J., 173–86, 321, 638, 860.
Dictionnaire nouveau de géographie universelle, 135.
Diederich, F., 892.
Dieffenbach, E., 896.
Dimitroff, Z., 638, 860.
Dixon, R. B., 638, 739, 749, 876.
Dixon and Kroeber, 321.
Dobrizhoffer, M., 876.
Dodge, R. I., 876.
Doigneau, A., 905.
Donaldson, H. H., 321.
Donaldson, T., 876.
Dopp, K. E., 321.
Dorsey, G. A., 321, 638, 739.
Dorsey and Kroeber, 739.
Dorsey, J. O., 135, 321, 440, 535, 638, 739, 860, 876.
Doughty, C. M., 902.
Douglas, J., 876.
Dowd, J., 885.
Drake, S. G., 876.
Dreyer, W., 905.
Driesmans, H., 135.
Drury, R., 896.
Dubois, C. G., 739.
Dubois and Beauchamp, 902, 915.
Duckworth, W. L. H., 908.
Dunbar, J. B., 876.
Dunlop, W., 739.
Durkheim, E., 535, 860.
Duveyrier, H., 885.
Dyer, T. F., 535.
Dzieduszycki, A., 638.

Earl, G. W., 896.
Eastman, C., 321.
Edkins, J., 321.
Eels, M., 876.
Ehrenreich, P., 321, 739, 861, 876, 910.
Eichmann, J. R., 135.
Elkus, S. A., 321.
Elliott, H. M., 902.
Ellis, A. B., 740, 885, 912.
Ellis, H., 535, 638.
Ellis, W., 896.
Ellis, W. G., 861.
Ellwood, C. A., 321.
Elmslie, D., 740.
Emerson, E. R., 638.
Emmons, G. T., 638.
Endemann, K., 885.
Engerrand, J., 905.
Enjoy, P. d', 535, 861.
Enright, W. J., 860, 892.
Ephraim, H., 638.
Erskine, J. E., 896.
Escher, R., 440.
Espinas, A. V., 440.
Eyre, E. J., 892.

Fábrega, H. P. de, 321, 876.
Farrand, L., 638, 740, 876, 882, 911.
Farrand and Kahnweiler, 740.
Farrar, F. W., 321.
Felkin, R. W., 135.
Ferree, B., 135, 638.

Fewkes, J. W., 638, 740, 749, 861, 876.
Fewkes and Stephens, 861.
Fielde, A. M., 321, 322.
Fies, K., 885.
Fillmore, J. C., 639.
Finsch, O., 896.
Fischer, A., 902.
Fischer, K., 639.
Fishberg, M., 906.
Fison, L., 322, 740, 741, 861.
Fison and Howitt, 892.
Fite, W., 639.
FitzGerald, W. W. A., 885.
Flahault, C., 135.
Fletcher, A. C., 639, 741, 861.
Florenz, K., 741.
Flügel, O., 322.
Folnesics, J., 639.
Forbes, F. E., 885.
Forbes, H. O., 896.
Foreman, J., 896.
Fornander, R., 896.
Fortescue, J. W., 135.
Fortier, A., 741.
Fouillée, A., 322.
Fowke, G., 639, 883.
Foy, W., 639.
François, H. von, 885.
Fraser, J., 741, 892.
Frauenstädt, P., 861.
Frazer, J. G., 535, 651–69, 741, 861, 873, 910.
Freeman, R. A., 885.
Frere, H. B., 861.
Fric, V., and Radin, P., 877.
Friederici, G., 135, 322, 440, 639, 861.
Friedmann, M., 322.
Fritsch, G., 885.
Frobenius, H., 886.
Frobenius, L., 135, 639, 862, 886, 896, 912.
Fühner, H., 741.
Fülleborn, F., 886, 912.
Furness, W. H., 896.
Futterer, K., 902.

Galton, F., 135, 535.
Gamboa, S. de, 877.
Garcilasso de la Vega, 877.
Gardiner, H. N., 910.
Gardiner, J. S., 896.
Gardner, F., 750.
Garnier et Ammann, 135, 639.
Garnett, L. M. J., 535.
Garson, J. G., 877.
Garson and Read, 873.
Gason, S., 892.
Gatschet, A. S., 322, 639, 877.
Gautier and Chudeau, 886.
Geddes and Thomson, 536.
Geiger, L., 322.
Geiger, W., 902.
Gennep, A. van, 536, 741, 862.
Gerber, A., 741.
Gerland, G., 135, 908.
Gibbs, G., 877.
Giddings, F. H., 862.
Giesswein, A., 322.
Gilmore, B. J., 639.
Gilmour, J., 902.
Girard, H., 886, 902.
Glassberg, A., 862.
Goblet d'Alviella, E., 639.
Goddard, P. E., 877.
Godden, G. M., 902.
Goeje, C. H. de, 877.
Goldstein, 910.
Gollmer, C. A., 322.
Gomme, A. B., 639.
Gomme, G. L., 639, 741, 862, 906.
Gordon, G. B., 322.
Gottschling, E., 886.
Götzen, G. A. von, 886.
Gräbner, F., 896.
Granville, R. K., 886.
Gray, J., 322.
Greifswald, G. J., 639.
Grey, G., 741, 892.
Grierson, P. J. H., 135.
Griffis, W. E., 741, 902.
Grigsby, W. E., 862.
Grinnell, G. B., 322, 536, 640, 741, 862, 877.
Groos, K., 640.
Groot, J. J. M. de, 741.
Grosse, E., 577–93, 640, 910.
Grunzel, J., 135.
Gubbins, J. H., 862, 902.
Guessfeldt, P., 886.
Guise, R. E., 896.
Gulick, S. L., 902.
Gutmann, B., 886.

Haast, J. von, 640.
Haberland, C., 741.
Haddon, A. C., 135, 543–49, 536, 640, 742, 862, 873, 896, 910, 914.
Haddon and Rivers, 862.
Haddon, Seligman, and Wilkins, 742.
Haddon and Watkin, 862.
Haddon, E. B., 640.
Hagen, B., 896, 914.
Hagen, K., 640.
Hahn, E., 136, 909.
Hale, H., 322, 742, 877.
Hales, F. N., 910.
Hales, H., 640.
Halkin, J., 886.
Hall, C. F., 877.
Hamilton, A., 640.
Hamilton, A. G., 536.
Hamy, E. T., 886, 902.
Hanoteau et Letourneaux, 886.
Happ, E., 441.
Hardisty, W. L., 877.
Hardwick, A. Arkell-, 886.
Harkness, H., 902.
Harkness, W., 323.
Harper, R. F., 862.
Harrison, C., 742.
Hartland, E. S., 862.
Hartmann, M., 536.
Hartmann, R., 886.
Haulleville et Coart, 640, 742.
Hauri, J., 862.
Hawtry, S. H. C., 877.
Haxthausen, A. von, 902.
Haynes, 883.
Hearn, L., 640.
Hearne, S., 877.
Heckewelder, J., 877.
Hedin, S., 902.
Hedinger, A., 441.
Hehn, V., 136, 906.
Hein, A. R., 641.
Hein, W., 640, 641.
Hellwig, A., 862.
Henderson, J., 892.
Hendren, S. R., 863.
Hennepin, L., 877.
Henshaw, H. W., 641.
Herbertson, A. J. and F. D., 136.
Heriot, G., 877.
Hervé, G., 886.
Hervey, D. F. A., 641.
Hewitt, E. L., 323.
Hewitt, J. F. K., 902.
Hewitt, J. N. B., 742, 863.

Hiekisch, C., 902.
Hildburgh, W. L., 742
Hildebrand, R., 863.
Hildebrandt, P., 641.
Hinde, S. L., 886.
Hirn, Y., 605–34, 641, 910.
Hirsch, W., 323.
Hirt, H., 907.
Hitchcock, R., 903.
Hobhouse, L. T., 323, 536, 863.
Hobley, C. W., 886.
Hodge, F. W., 136, 877.
Hodgkinson, C., 892.
Hodgson, C. P., 892.
Hodson, T. C., 641.
Hoernes, M., 906, 915.
Hoffmann, O., 910.
Hoffmann, W. J., 323, 641, 743, 863, 877.
Holden, E. S., 323, 641.
Holdich, T. H., 902.
Hollis, A. C., 323, 742, 886, 912.
Hollub, E., 886.
Holmes, H., 642.
Holmes, T. Rice-, 906.
Holmes, W. H., 441, 558–76, 641, 642, 873, 877, 883.
Holmes, and Mason, 873.
Holub, E., 886.
Hore, E. C., 886.
Horn, W. A., 892.
Hose, C., 896.
Hose and McDougall, 742.
Hose and Shelford, 642.
Hough, W., 136, 323, 441.
Hovelaque, A., 886.
Hovorka und Kronfeld, 742, 909.
Howard, G. E., 536.
Howitt, A. W., 213–34, 258–81, 323, 536, 642, 669–83, 742, 764–87, 863, 892, 913.
Howitt and Fison, 863.
Howitt and Siebert, 742.
Howitt, W., 892.
Hrdlička, A., 877.
Huc, E. R., 903.
Humboldt, A. von, 877.
Hunter, J., 877.
Hurgronje, S., 896, 914.
Hutchinson, T. J., 887.
Hutter, D., 887.
Hyades, P., et Deniker, J., 878.
Iguchi, 536.
Ihering, H. von, 642.
Ireland, A., 136.
Irle, I., 887.

Jackson, F. G., 903.
Jacob, G., 903.
Jacobowski, L., 536.
Jacobs, J., 742.
Jacottet, E., 743.
Jagor, F., 896, 903.
James, E., 878.
Jastrow, M., 743.
Jayne, C., 642.
Jenks, A. E., 136, 897.
Jennings, H. S., 323.
Jensen, H., 323.
Jetté, J., 743.
Jevons, F. B., 743.
Jochelson, W., 743, 903.
Joest, W., 878, 897.
Johnston, H., 136, 323, 441, 743, 863, 887, 912.
Johnstone, H. B., 887.
Johnstone, J. C., 897.
Jolly, J., 863.
Jones, P., 878.
Jones, W., 683–92, 743, 878.
Jong, K. H. E. de, 743.
Joret, C., 136.
Joyce, P. W., 906.
Judd, C. H., 323.
Jülg, B., 743.
Jung, K. A., 323.
Junghuhn, F., 897.
Junker, W., 887, 912.

Kakyo, I., 897.
Kandt, R., 642.
Karutz, Dr., 441, 643.
Kate, H. ten, 323, 743, 903.
Keane, A. H., 323, 878, 887, 892, 897, 903, 906, 908.
Keller, A. G., 873.
Kelly, F., 878.
Kéraval, P., 323.
Kern, R. A., 324.
Kerschensteiner, G., 324.
Kersten, L., 878.
Kidd, D., 324, 887, 912.
King, I., 324, 743.
King, R., 324.
Kingsley, M. H., 743, 887.
Kinnaman, A. J., 324.
Kirby, R. J., 324.
Kittredge, G. L., 750.
Klaatsch, H., 906.
Klose, H., 887.
Kloss, C. B., 897.
Klugmann, N., 536.
Knocker, F. W., 897.
Koch-Grünberg, T., 642.
Koenigswald, G. von, 878
Kogenei, 903.
Köhler, A., 863.
Kohler, J., 863.
Kolben, P., 887.
Kollman, P., 887.
Kovalevsky, M., 536, 863.
Kraepelin, E., 642.
Krämer, A., 642, 897, 914.
Krämer, H., 136.
Krapf, L., 887.
Krapotkin, P., 324.
Krasinski, 903.
Krause, A., 878.
Krause, G. A., 743.
Krauss, F. S., 743, 903, 906.
Krehl, C. L. E., 743.
Kremer, A. von, 324.
Krieger, M., 897, 914.
Kroeber, A. L., 642, 743, 744, 878.
Kropf, A., 887.
Kubary, J. S., 897, 914.
Küchler, L. W., 536.
Kükenthal, W., 897.
Kulischer, M., 324.
Kürchhoff, D., 887.
Kuske, B., 642.

Laborde, J. V., 324.
Lafèvre, A., 324.
LaFlesche, F., 744, 750.
Lahontan, L. A. de, 878.
Landor, A. H. S., 897.
Lane, E. W., 887.
Landtman, G., 744, 863.
Lang, A., 744.
Langkavel, B., 136.
Lapicque, L., 887.
Lapouge, G. V. de, 136.
Lartet and Christy, 906.
Lasch, R., 136, 137, 536, 642, 744, 864, 909, 910.
Laufer, B., 324, 643, 903.
Lavelaye, E., 864.
Lazarus, M., 137, 324, 864.
LeBon, G., 324.
Lehman, J., 643.
Leichardt, F. W. L., 892, 893.
Lejeune, M. C., 537.
Leland, C. F., 744.

LeMoyne, M. J. de, 878.
Lenormant, F., 744.
Lenz, O., 887.
Leonard, A. G., 744, 911.
Leslie, D., 887.
Lesson, A., 897.
Letourneau, C., 137, 324, 537, 864.
Leuschner, F., 643.
Levenstein, S., 887.
Lewin, T. H., 903.
Lewis, A. B., 878.
Lewis and Clarke, 878.
Lichtenstein, H., 887.
Liebrecht, F., 744.
Liétard, G. A., 324, 325.
Lindsay and Kano, 643.
Lippert, J., 137, 441, 643, 744.
Livingstone, D., 887.
Lloyd, A., 903.
Lockhart, J. H. S., 325.
Loeb, J., 325.
Low, H., 897.
Löwenstimm, A., 864.
Lowrie, R. H., 878.
Lubbock, J., 906.
Lukas, F., 325.
Lumholtz, C., 643, 878, 893.
Luschan, F. von, 643, 873, 888, 897, 905.
Lyall, A. C., 903.
Lyman, B. S., 903.

Maas, A., 897.
Mabille, A., 888.
MacCauley, C., 643, 879.
McCoan, J. C., 888.
McCurdy, G. G., 906.
MacDonald, D., 888.
Macdonald, D. B., 325.
Macdonald, G., 888.
Macdonald, J., 744, 864, 888.
Macdonald, R. M., 325.
MacDougall, R., 325.
McDougall, W., 325.
McDougall and Myers, 325.
McFarlane, S., 897.
McGee, W J, 55–73, 137, 325, 873, 879.[1]
Macgowan, D., 325.
McGuire, J. D., 441, 643.
Mckenney, T. L., 879.
Mackenzie, A., 325, 879.
Maclean, J., 864, 879.
McLennan, J. F., 537.
MacRitchie, D., 903.
Maget, G., 744.
Magnus, H., 325.
Mahler, R., 897.
Mähly, E., 888.
Maine, H. S., 864.
Mallery, G., 325, 326, 744.
Man, A., 326.
Man, E. H., 643, 898, 914.
Mann, R. J., 888.
Manouvrier, L., 326, 537.
Manuwiri, Te, 898.
Manwaring, A., 326.
March, H. C., 643.
March, O. S. von der, 326.
Marett, R. R., 744.
Mariner, W., 898.
Marion, H., 537.
Markham, C. R., 898.
Marriott, H. P. F., 864.
Marshall, W. E., 903.
Martin, F. R., 903.
Martin, R., 898, 914.
Martius, K. F. P. von, 864, 879.
Mason, J. E., 898.
Mason, O. T., 29–45, 137, 326, 441, 442, 643, 910.
Maspero, G., 888.
Mass, 864.
Mathew, J., 643, 893.
Mathews, R. H., 326, 537, 644, 865, 893.
Mathews and Everett, 893.
Matthews, C. H. S., 893.
Matthews, W., 644, 745, 865, 879.
Mauer, F., 865.
Maurer, F., 745.
Maxfield and Millington, 750.
Mayer, A., 537.
Mayne, R. C., 879.
Mayr, F., 888.
Mazzarella, G., 865.
Mead, G. H., 326, 910.
Meakin, B., 888.
Menges, J., 326.
Merker, M., 865, 888.
Meyer, A. B., 644, 898.
Meyer und Parkinson, 644.
Meyer und Richter, 644.
Meyer and Schadenburg, 898.
Meyer, H., 443.
Meyer, H. E., 893.
Meyer, J. Br., 326.
Miller, E. Y., 898.
Milligan, R. H., 888.
Mills, T. W., 326.
Mindeleff, C., 137, 644.
Mindeleff, V., 644.
Mondière, A. T., 888.
Monteil, C., 326.
Montelius, O., 906, 907.
Montgomery, H., 883.
Montgomery, T. H., 537.
Mooney, J., 745, 750, 865, 879.
Moorehead, W. K., 883.
Morga, A. de, 898.
Morgan, C. L., 326.
Morgan, J., 893.
Morgan, L. H., 326, 537, 644, 745, 803–23, 835–55, 865, 879.
Morice, A. G., 879.
Mortillet, G. de, 137, 443.
Mortillet, G. and A., 907.
Mosely, H. N., 898.
Much, M., 907.
Mücke, J. R., 137, 865.
Mullens, J., 698.
Müller, S., 907.
Mumford, E., 866.
Munro, N. G., 903.
Munro, R., 907.
Murdoch, J., 326, 879.
Murdoch and Yamagata, 904.
Musters, Lt., 879.
Myers, C. S., 644.
Myers and Haddon, 745.

Nachtigal, G., 888.
Nadaillac, Marquis de, 326, 883, 907.
Nansen, F., 879.
Nassau, R. H., 745.
Negelein, J. von, 745.
Nelson, E. W., 879.
Newell, W. W., 745, 750.
Niblach, A. P., 879.
Nicholas, F. C., 879.
Nicholls, J. H. Kerry-, 898.
Nieboer, H. J., 537, 866, 911.
Nina-Rodrigues, 745.
Nieuwenhuis, A. W., 898, 914.

[1] Professor McGee does not place periods after W and J in his name. These were inserted in some of the preceding pages by an oversight.

Nilsson, S., 907.
Nitobe, I., 904.
Nordenskiöld, E., 880.
Nordenskiöld, G., 644.
Northcote, G. A. S., 888.
Nuoffer, O., 745.
Nuttall, Z., 750.

Oberländer, R., 893.
Oldfield, A., 893.
Ollone, Capt. d', 888.
Oppel, A., 866.
Overbergh, C. van, 888, 912.
Owen, M. A., 745.

Palmer, E., 893.
Park, M., 888.
Parke, T. H., 888.
Parker, A. C., 880.
Parker, K. L., 745, 893.
Parkinson, J., 888.
Parkinson, R., 898, 914.
Parsons, E. C., 537.
Partridge, C., 888.
Passarge, S., 888, 889, 913.
Pattetta, F., 866.
Paulitschke, P., 889, 913.
Payne, E. J., 137, 326, 866, 880.
Peal, S. E., 537.
Pearson, K., 326.
Pechuël-Loesche, E., 889, 913.
Peckham, G. W. and E. G., 327.
Peet, S. D., 443, 745, 866.
Penck, 138.
Penka, C., 138.
Pennefather, F. W., 898.
Perez, R. P. F. A., 898.
Perrig, A., 745.
Peschel, O., 138.
Peterson and Luschan, 904.
Petitot, E., 746, 880.
Petrie, W. M. F., 138.
Petrucci, R., 866.
Pfeil, Graf von, 327.
Pfeil, J., 898.
Phillips, R. C., 889.
Phister, N. P., 746.
Pischon, C. N., 746.
Pitcairn, W. D., 898.
Pleyte, C. M., 644, 746, 899.
Ploss, H. H., 327, 537.
Ploss and Bartels, 910.
Pöch, R., 899.
Pogge, P., 889.
Polack, J. S., 899.
Pommerol, J., 537.
Porter, J. P., 327.
Posada, H., 866.
Post, A. H., 537, 866.
Powell, B. H., Baden-, 866, 904.
Powell, J. G., 746.
Powell, J. W., 327, 443, 644, 750, 823–35.
Powers, S., 880.
Preuss, K. T., 644, 645, 746.
Proksch, O., 866.
Proyart, L. B., 889.
Pryer, W. B., 899.
Putnam, F. W., 645.

Quatrefages, A. de, 880, 889, 907.
Quedenfeldt, M., 889.

Radloff, W., 746.
Rae, J., 750.
Raffles, T. S., 899.
Ramabai, Pundita, 537.
Ramseyer, F. A., and Kühne, J., 889.
Rancke, C. E., 327.
Rasmussen, K., 880.
Ratzel, F., 45–47, 92–98, 138, 327, 443, 426–35, 537, 549–58, 645, 746, 753–64, 880, 889, 893, 904, 907, 908.
Rau, C., 138.
Ray, S. H., 327, 746.
Réclus, É., 138, 893.
Reed, V. Z., 645.
Reed, W. A., 899.
Reeves, W. P., 899.
Regnault, F., 138, 645.
Reibmayr, A., 327.
Reid, A. P., 746.
Rein, J. J., 904.
Reinach, S., 645, 746.
Reindorf, C. C., 889.
Reinhardt, L., 907.
Reuleaux, F., 443.
Réville, A., 746.
Rhamm, K., 537.
Rhŷs, J., 907.
Rhŷs and Brynmor-Jones, 907.
Ribbe, C., 899.
Richter, O., 899.
Ridgeway, W., 138, 327, 746.
Ridley, W., 893.
Riggs, S. O., 880.
Rink, H. J., 746, 880.
Rink, S., 746.
Rink and Boas, 645.
Ripley, W. Z., 138, 907, 915.
Risley, H., 904, 915.
Rivers, A. L.-F. Pitt-, 335–99, 404–25, 899, 910.
Rivers, W. H. R., 328, 483–89, 538, 746, 866, 904, 915.
Rivet, Dr., 880.
Rivière, E., 645.
Robertson, G. S., 904.
Robinson, C., 889.
Robinson, J., 328.
Robinson, J. H., 5–12, 873.
Rochet, L., 328.
Rockhill, W. W., 904.
Roeder, A., 328.
Rohrbach, P., 904.
Roscoe, J., 889.
Rose, H. A., 866.
Rosenberg, H. von, 899.
Roth, H. L., 98–112, 538, 645, 866, 880, 889, 899, 914.
Roth, W. E., 138, 645, 867, 893, 913.
Roth and Butler, 893, 913.
Royce, C. A., 880.
Royce, C. C., 880.
Royce, J., 443.
Ruelle, E., 889.
Rusden, G. W., 894.
Russell, F., 746, 880.
Rütmeyer, L., 899.
Rutot, A., 907.

Sabatier, C., 538.
Sagard, T. G., 880.
Saleeby, N. M., 899.
Salvado, R., 894.
Sande, G. A. J. van der, 899, 914.
Sarasin, P. and F., 698, 915.
Sarazin, H., 889.
Sarbah, J. M., 867.
Sartori, P., 867.
Satow, E., 645, 746.
Schadenberg, A., 899, 900.
Scheerer, O., 328.
Schellong, O., 645.
Schmid, K. A., 328.
Schmidt, E., 880.
Schmidt, M., 645, 880, 911.
Schmidt, P. W., 894.

Schmoller, G., 867.
Schnee, H., 900.
Schneider, O., 328.
Schneider, W., 747.
Schomburgk, R. H., 880.
Schoolcraft, H. R., 747, 880.
Schrader, F., 138, 907.
Schrader, O., 328, 907.
Schreiber, M., 538.
Schrenck, L. von, 904.
Schufeldt, R. W., 645.
Schultze, F., 328, 747.
Schultze, L., 889, 913.
Schurtz, H., 328, 646, 747, 867, 908, 911.
Schwalbe, G., 907.
Schwartz, W., 747, 904.
Schweiger-Leschenfeld, A. von, 538.
Schweinfurth, G., 646, 889.
Seebohm, F., 907.
Seidel, H., 889.
Seidlitz, N. von, 328.
Seler, E., 747, 883.
Seligman, C. G., 328, 538.
Semple, E. C., 47–54, 138, 909.
Semon, R., 894.
Senfft, A., 867.
Sergi, G., 907.
Sharp, F. C., 867.
Sheldon, M. French-, 889.
Shooter, J., 889.
Sibree, J., 867, 900.
Siebold, P. F., 904.
Sieroshevski, 74–92.
Siemiradzki, J. von, 880.
Sievers, W., 889.
Sighele, S., 328.
Simmel, G., 538, 646, 747, 867.
Sinclair, A. T., 646.
Skeat, W. W., 747, 911.
Skeat and Blagden, 139, 328, 443, 538, 646, 747, 900, 915.
Skertchley, S. B. J., 443.
Smet, P. J., 880.
Smith, A. H., 328.
Smith, E. A., 328, 747.
Smith, J., 881.
Smith, P., 900.
Smith, P. W. Bassett-, 894.
Smith, S. P., 900.
Smith, W. R., 747, 904.
Smyth, R. B., 894.
Somerville, B. T., 900.
Somlo, F., 909.
Souffret, F., 329.
Specht, C. A., 889.
Speck, F. G., 881.
Speke, J. H., 889.
Spencer, B., 867.
Spencer, F. C., 329.
Spencer, H., 139, 186–213, 329, 443, 509–12, 538, 646, 704–32, 867, 881, 889, 894, 900, 904.
Spencer and Gillen, 234–58, 329, 443, 468–82, 538, 646, 747, 788–92, 862, 894, 913.
Spinden, J., 881.
Spix, J. B. von, and Martius, C. F. P. von, 881.
Squier, E. G., 874, 881.
Stanley, H. M., 889, 890.
Starbuck, E. D., 747.
Starcke, C. N., 538.
Starr, F., 890.
Stearns, R. E. C., 329.
Steerè, J. B., 881.
Steinen, K. von den, 329, 881, 912.
Steinmetz, S. R., 329, 538, 747, 867, 868, 911.
Steinthal, H., 329, 748.
Stenin, P. von, 904.
Stentz, G. M., 329, 904.
Stephan, E., 329, 646.
Stephen, A. M., 881.
Stephens, J. L., 881.
Stepman and Graebner, 900.
Stevens, F. E., 881.
Stevens, H. V., 538.
Stevenson, J., 748.
Stevenson, M. C., 646, 747.
Stevenson, T. E., 329.
Stickney, G. P., 139.
Stigand, C. H., 890.
Stokes, J. F. G., 646.
Stoll, O., 329, 538, 748, 881, 909.
Stolpe, H., 646.
Stow, G. W., 890.
Stratz, C. H., 646.
Strauss, A., 907.
Strehlow, C., 894, 913.
Stuart, J. McD., 894.
Stuart, T. P., 868.
Stübel, Reiss, and Koppel, 443.
Stuhlmann, F., 890.
Summer, W. J., 74–92, 868.
Sumner, W. G., 911.
Sutherland, A., 868.
Suyematsu, K., 868.
Svoboda, W., 900.
Swan, J. G., 881.
Swanton, J. R., 748, 868, 881.

Takaishi, S., 538.
Tanner, A., 538.
Taplin, G., 894.
Tarde, G., 329, 868.
Tate, H. E., 890.
Taylor, I., 329.
Taylor, R., 900, 915.
Teit, J., 748, 881.
Temple, R. C., 330.
Theal, G. M., 748, 890, 913.
Thilenius, G., 900.
Thomas, C., 330, 881, 883.
Thomas, N. W., 329, 443, 539, 874.
Thomas, W. I., 155–73, 281–303, 329, 443, 539, 868.
Thompson, B. H., 749.
Thompson, R. C., 748.
Thomson, B. C., 900.
Thorndike, E. L., 330.
Thrupp, J., 139.
Thurn, E. F. Im, 636, 881, 912.
Thurston, E., 904.
Thurston, G. P., 883.
Thwaites, R. G., 881.
Tillinghast, J. A., 890.
Topinard, P., 330, 873.
Torday, E., and Joyce, T. A., 890.
Tout, C. Hill-, 868, 882.
Tregear, E., 900.
Tschoffen, 890.
Tucker, A. R., 890.
Tufts, J. H., 539, 868.
Turner, C. H., 330.
Turner, G., 900.
Turner, L. M., 882.
Turner, W. Y., 900.
Tylor, E. B., 330, 399–404, 443, 539, 636, 692–704, 748, 869, 873, 874, 882, 894, 911.

Ule, O., 139.
Utiesenović, O. M., 869.

Vacca, G., 331.

Vámbéry, A., 869, 904, 907, 908.
Veblen, T., 539, 636, 869.
Velten, C., 890.
Venturillo, M. H., 900.
Verneau, R., 869.
Verner, S. P., 890.
Vierkandt, A., 139, 331, 869, 909.
Villeneuve, Verneau, et Boule, 908.
Vincent, G. E., 331.
Virchow, R., 139, 900.
Vissering, W., 331.
Voit, C., 139.
Volland, Dr., 904.
Voth, H. R., 539, 748.

Wachter, W., 443.
Waddell, L. A., 905.
Waitz, T., 139, 331, 882, 890, 894, 900.
Wake, C. S., 331.
Walker, J. B., 894.
Wallace, A. R., 882.
Wallaschek, R., 593–605, 646, 910.
Wallis, B., 869.
Warburton, D. E., 894.
Ward, H., 890.
Ward, L. F., 331, 443.
Wardle, H. N., 748.
Warming and Vahl, 139.
Warneck, J., 900, 911.
Warren, W. W., 882.
Washburn, M. F., 331.
Watkins, J. E., 443.
Watson, J. B., 331.
Weale, J. M., 331.
Webster, H., 792–803, 869, 911.
Weichsel, J., 910.
Wehrli, H., 905.
Weissman, A., 139.
Welling, J. C., 869.
Werther, C. W., 891.
Westermarck, E., 447–68, 489–509, 539, 748, 749, 869, 910, 911.
Weston, W., 905.
Weule, K., 891, 900, 913.
White, R. B., 882.
Whitmere, S. J., 900.
Wickersham, J., 331.
Widenmann, A., 891.
Wied, M. zu, 882.
Wilkes, C., 882.
Wilkin, A., 749, 869.
Wilkinson, R. J., 749.
Will, G. F., and Spinden, H. J., 882.
Williams, F. W., 749.
Williams, S. W., 905.
Williams, M., 749.
Williams and Calvert, 901.
Willoughby, C., 882.
Willoughby, W. C., 869.
Wilser, L., 539.
Wilson, J. A., 901.
Wilson, T., 647.
Wilson and Felkin, 891
Wilutsky, P., 539.
Windle, B. C. A., 908.
Winship, G. P., 882.
Winsor, J., 882, 883.
Winterbottom, T., 891.
Wissler, C., 647, 882.
Wissler and Duval, 749.
Wissmann, H. von, 891.
Witte und Schmidt, 647.
Wlislocki, H. von, 749, 908.
Woermann, K., 647.
Wolf, J., 331.
Wolf, L., 890.
Woodruff, C. E., 139, 647.
Woods, J. D., 894.
Woods, J. E. T., 894.
Woodthorpe, R. G., 905.
Worcester, D. C., 901, 915.
Wray, L., 647.
Wundt, W., 331, 647, 749, 909.
Wylde, A. B., 891.

Yarrow, H. C., 749.
Yate, W., 901.
Yoe, S., 905.
Younghusband, F. E., 905

Zaborowski, M., 905.
Zachariae, T., 749.
Zeisberger, D., 882.
Zöller, H., 901.

GENERAL INDEX

Abstraction, 24, 146, 160, 163, 200, 201, 206, 207, 210, 317, 733, 856.

Acculturation, 303, 306, 313.

Activity, food and sex basis of, 177.

Aged, authority of, 788, 856; treatment of, 89, 90, 91, 533.

Aesthetics, 544.

Altruism, 72, 194, 200.

Agriculture, 98, 180, 192, 659; as woman's work, 109; communal, 830; implements of, 400; insecurity of, 96; development of, 57, 66, 73, 109, 111; theory of, 98; types of, 96.

Almanacs, 364.

Amulets, 554.

Animals, relations with man, 66, 68, 70, 81, 83, 93, 183.

Animism. *See* Religion.

Anthropogeography, 29.

Arctic area, 39, 40, 74.

Arid regions, 50, 55, 73.

Armistice, ceremonial, 233.

Armor, 375.

Arrested development, causes of, 51.

Art, 148, 182, 395, 543, 544, 547, 549, 560, 561, 616, 621, 629, 631, 635.

Art, and control, 15, 605, 615, 621; and history, 609; and information, 605; and magic, 626; and war, 620; and work, 614; ceramic, form and ornament in, 558; commemorative, 608, 612, 613, 624; decorative, 543, 544, 561, 570, 575; influence of materials on, 547, 560, 561, 568, 573, 576. *See* Dance, Drama, Music, Ornament, Pottery, Professions.

Artistic representations, life-histories of, 546.

Arts, types of, 33.

Artificial deformations. *See* Mutilations.

Association, 176, 664.

Astronomy, 364.

Attention, of Savage, 439; and control, 16; relation to culture, 858; waste of, 437.

Barter, 31, 42, 495, 534, 781.

Birth customs, 526.

Birth rate, 533.

Blood-vengeance, 84, 758, 781, 783

Brain, 145, 173.

Bride-price, 490, 534.

Cactus, 58.

Calendars, 364.

Canoes, 406.

Carrying, methods of, 359.

Cattle-breeding, 92.

Causation, idea of, 201, 208.

Cereals, 43, 110.

Chieftainship, 282.

Children, 90, 195, 213.

Choice, power of, in savages, 148.

Church, influence on culture, 289, 294, 302.

Civics and anthropology, 13.

Civilization, main superiority of, 438; threshold of, 131.

Clocks, 364.

Clothing, 549.

Clubs, men's, 515; women's, 519.

Collectors, instructions to, 873.

Colonization, 763.

Commensality, 57, 66.

Commerce. *See* Trade, Barter.

Communality life, 66, 81, 114, 851.

Communication, 49, 126, 264, 306, 429, 433, 545.

Confederacy, Iroquois, 803 ff.

Conservatism, 21, 198, 210, 317, 428, 780.

Consumption, 31, 78.

Control, 14, 133, 159, 193, 216, 316, 437, 605, 615, 733, 765, 856. *See* Initiation ceremonies, Secret societies.

Co-operation, 55, 59, 66, 359, 619.

Corrobboree, 577, 599.

Cosmology, 634.

Councils, 769, 812, 826.
Counting, 146, 273, 359.
Cowardice, 621.
Credulity, 208.
Crisis, relation to control, 16–22, 133, 172, 436, 526, 533, 635, 753, 858.
Cruelty, 197, 622.
Culture, and clothing, 550; as progress from naturalism to artificialism, 45; and population, 46; areas, 38, 39, 44; bases of, 130; borrowings of, 431 classification, by epochs of, 25, 133; confused with progress in intelligence, 157; contacts of, 47, 129, 429, 434; continuity of, 430; dependence on mechanical invention, 437; dependence on tradition, 427; geographical factors of, 51, 53, 55, 130, 132, 426, 763; influence of interest in future on, 609; influence of segregation on, 434, 754, 760; origins of, 23, 315; parallelism in development of, 164; pastoral, 66, 74; physical weakness of man as factor of, 467; regional study of, 857; relation to abstraction, 24; relation to crisis, 17, 20, 858; relation to mind, 130, 155, 426; theories of, 23; uniformity of, 130, 313.
Curiosity, 209.
Custom, changes of, 780; force of, 764; influence on activities, 153; influence on mind, 152; relation to standards of behavior, 153; rudimentary, 476.
Customs duties, origin of, 127.

Dance, aesthetic character of, 587; degeneration of, in civilization, 593; dramatic, 598, 606; erotic, 579, 585, 593; exciting power of, 586, 589; gymnastic, 577; mimetic, 583, 595; music in, 582, 596; relation to drama, 589; rhythm in, 577; social significance of, 591; symbolic, 627; totemic, 225; types of, 288, 577.
Death, attitude toward, 184, 671.
Decoration, 543 ff.
Democracy, 756.
Desert, co-operation in, 65.
Desert-culture, 55, 64.
Desert people, characteristics of, 60.
Despotism, 755.
Discouragement, areas of, 38, 54.
Distribution of man, 45.
Domestic animals. *See* Animals.
Drama, 593, 599, 603.
Dreams, 672, 705, 710, 733, 734.

Earth, relation to man, 29 ff.
Economic organization, 112 ff.
Economic unit, 74.
Economics and anthropology, 13.
Education and anthropology, 13.
Educational systems of the savage, 142 ff., 213, 258 ff., 317, 436.
Emanation theories, 632.
Emotion, 147, 186, 604; in art and religion, 635; in child and savage, 190.
Engineering, 371.
Environment, adaptation to, in plants, animals, and man, compared, 61, 65, 71; control of, 14, 65; relation to culture, 166, 547, 712.
Ethics. *See* Morality.
Ethnic areas, 39.
Ethnology, importance of, 4, 12.
Ethnotechnology, 43.
Evolutionary view of life, 3.
Exchange, genesis of, 113.
Expectancy, as factor of art, 546.

Family, as nucleus of society, 461; pastoral type of, 87; relation to marriage, 457; relation to state, 762; size of, in relation to economic conditions, 75.
Family life, among animals, 448; among savages, 451; relation to type of marriage, 483, 510; relation to slavery, 88; rôle of father in, 452.
Filial feeling, 507.
Fire, 15, 406.
Fire-sticks, 369.
Folk-lore, 145, 150. *See* Myth, Tradition.
Food, division of, 78; improvidence concerning, 104; magic control of, 635, 789; varied character of, 98.
Food regulations, 528, 531.
Food supply, conservation of, 92; relation to social organization, 80, 131, 465.
Foreign rulers, 764, 771.
Frontiers, importance of, 760.

Genius, 19, 54, 427.
Geographic environment, relation to culture, 130.
Geographic factors, 47, 49, 51, 53, 54, 60, 62, 95, 763.
Geographic location, 52, 82, 95.
Geographic regions, 37, 38.
Gifts, and trade, 114, 116, 534.
Government, as mode of control, 15; separation of civil and military, 821; secret societies in, 793; women in, 825, 853; tribal, 764, 823, 834.
Gregariousness, in apes and man, 461.

Habit, 17, 21, 131, 144, 185, 198, 815.
Haftings, types of, 336.
Heredity and environment, 48.
Heterogeneity of lower races, 133, 764.
History, and anthropology, 13; as a science, 5.
Hospitality, 78, 114, 478, 835, 842, 854.
Hydrotechnology, 369.
Hydrotechny, 370.

Ideas, progressive rôle of, 130.
Imagination, 202, 210, 607.
Imitation, 560, 626.
Imitativeness, 204, 205. *See* Mimicry.
Immediacy of primitive life, 178.
Immortality, 312, 700, 711, 717.
Implements. *See* Tools.
Improvidence, 76, 191, 199.
Incest, 487.
Individual, as the real variable, 173.
Individualism, 753.
Industrial development, 43.
Industrial districts, 112.
Industrial peoples, 122.
Industries, 30, 93; centrifugal and centripetal movement of, 41; origin of, 40; and art, 614; effect of tribute collection on, 128.
Information, as basis of art, 544.
Inhibition, 147, 159, 160.
Initiation ceremonies, 213, 234, 316, 688, 796; dramatic character of, 290; exclusion of women from, 527; not in hands of medicine man, 300; objects of, 215, 224, 231, 236.
Intellectual evolution, 202.
Intelligence, 206, 213, 615.
International dealings, 815.
Interrelations of life, 65.
Invention, 210, 335, 359, 426, 438; as aid to social organization, 467; as condition of progress, 430, 437, 438; as mode of control, 15; as test of mind, 166; importance of tradition for, 427; loss of, 428; opposition to, 428; order of emergence of, 25; origin of, 314; stimulated by animals 35.
Irrigation, 63, 96, 369, 370.

Jealousy, 471, 530.

Kinship, basis of social organization, 810.
Knots and hitches, 355.

Labor, 75, 97, 131, 182, 190, 614; communal, 372; division of, 107, 122, 168, 303; songs and dances, 598, 616, 620.
Land, communal use of, 75, 85, 100, 114; tenure, 191.
Language, as mode of control, 15; development of, 36, 617; inadequacy of, 706, 723; influence of exogamy and sex-segregation on, 521.
Law, 292, 779.
Laziness, 131, 190.
Legends. *See* Myth.
Liberty, love of, 192.
Longevity, in deserts, 61.
Luxury, 551, 557.

Machinery, evolution of, 366.
Magic, 284, 437, 617, 622, 626, 632, 634, 657–69, 756; as system of control of nature, 437, 682; fallacy of, 664; imitative or mimetic, 652; sympathetic, 545, 632, 651.
Manitou, 683.
Markets, 118, 120, 781.
Marriage, 184, 454, 511, 530; as mode of control, 16; by capture, 475, 496, 503, 533; by choice, 489, 499, 504; by contract, 476, 505, 508; by elopement, 500; by purchase, 489, 496, 503, 534; ceremonies, 527, 534; child-marriage, 498, 505; endogamy and exogamy, 530, 828; group-marriage, 468, 470, 478, 481; monogamy, 509;

origin and antiquity of, 447; polyandry, 483, 532; polygamy, 87, 525; promiscuity, 451, 460, 472, 477, 487, 488, 530, 531.
Matriarchal system, 756, 828.
Measuring, 201, 359, 361.
Mechanics, 356, 367.
Medicine, 16, 631, 662.
Medicine-man, 281, 627, 669, 680.
Memory-helping devices, 360.
Message-sticks, 264.
Messengers, 126, 264, 274, 317, 818.
Meteorology, 366.
Method of anthropology, 873; of study, 3 ff.
Metrology, 362.
Migrations, 42, 50, 429.
Mimicry, instinct of, 588.
Mind, 26, 107, 128, 143, 147, 150, 155, 158, 164, 169, 173, 186, 188, 191, 197, 201, 316, 439, 630, 632, 704, 710; development of, 175, 316, 735; hunting type of, 168, 176, 181; types of, 176; unity of, 26, 130, 148, 167, 313, 315.
Miscegenation, between plants and animals, 59.
Missing link, 907, 908.
Modesty, 549, 551.
Money, 119, 361.
Monotony, areas of, 38.
Morality, 148, 154, 165, 197, 223, 227, 232, 436, 635, 700, 857.
Music, 582, 593, 596, 600, 602, 603, 607, 616, 621.
Mutilations, as ornament, 555.
Mystery, power of, 684.
Myth, attitude toward, 691; comparative study of, 309; development of, 301, 303, 311; dissemination of, 304, 307, 312, 433.

Names, personal, 436, 724, 735, 829; nicknames, 728; totem-name, 229.
Navigation, influence on migration, 42; modes of, 404.
Nomads, 50, 94, 101.
Numbers, 359.

Old Men. *See* Aged.
Opera 602.
Oratory, 766.
Ordeals, expiatory, 784.
Occupations, professional. *See* Professions.
Occupations, relation of, to activity, 175; to art, 635; to sex, 523; specialization of, 17, 167, 317. *See* Professions.
Ornament, 543 ff. 553, 565, 572, 625. *See* Art.

Pantomime. *See* Drama, Dance, Mimicry.
Parallelism, geographical and cultural, 54; in mental development, 164, 211; in myths, 306; vs. spread of ideas, 317.
Parental instinct, 195, 447, 456.
Particularism, errors of, 22, 531, 533, 734.
Paternal authority, 504, 506.
Perception, 149, 203, 204.
Phallicism, 472, 626.
Philosophy, 150.
Picture-writing, 545, 611.
Pithecanthropus erectus, 907, 908.
Plants, domestication of, 109.
Play, as mode of control, 16.
Pleasure-pain reactions, 167.
Plough, origin of, 399.
Poetry, 586, 594, 607.
Poisons, use of, 394, 398, 676.
Political organization, 81, 511, 753, 856.
Population, 45, 63, 83, 510, 755.
Potter's wheel, 367.
Pottery, 558.
Precociousness, of savage, 211.
Prehistoric period, importance of, 5; in America, 883.
Prevision of distant results, 201.
Professions, and patronage, 302; literature, 291; medicine, 284; music and dancing, 287; origin of, 283.
Progress, basis of, 157, 426, 438; meaning of, 30; relation to crisis, 18; slowness of early, 132.
Property, private, 82, 114, 201.
Proprietary instinct, development of, 191.
Proverbs. 161.

Puberty customs, 527. *See* Initiation ceremonies.

Race-improvement, 316.

Race-mixture, 548, 763.

Race-prejudice, 156.

Race-problem, 873.

Races, extinction of, 46; origin of, 39.

Rain-making, 682.

Realism, in art, 547, 566.

Reasoning, 151, 172, 205.

Recapitulation theory, 26.

Religion, 15, 183, 223, 665, 692, 733; absence of, 667, 692, 714; and art, 545; and emotion, 635, 684; and environment, 37, 712; and magic, 665, 733; and sex, 520, 523; ancestor-worship, 609, 717, 734; animal-worship, 132, 718, 735; animism, 692, 699, 702; evolution of, 666, 692, 701, 704; ghost theory of, 281, 704; natural, 683, 700; nature-worship, 684, 731; plant-worship, 730.

Representativeness, 207.

Restraint, intolerance of, 76, 192.

Rhythm, 587, 619.

Ritual, derivation of, 689.

Sacrifices, 714.

Science, 170, 171, 438.

Sea coast, influence of, 51.

Sea power, 52.

Secret societies, 792.

Sedentary life, 95.

Segregation, 48, 434, 514, 527, 549, 760.

Sennit, 341, 415, 416.

Sense-perceptions, 158, 202.

Sexes, antagonism of, 512, 518. *See* Segregation, Solidarity, Woman, Marriage.

Slave trade, 124, 754.

Skepticism, 202.

Sleep. *See* Dreams.

Sociability, 193, 199.

Social organization, 15, 37, 74, 83, 85, 288, 465, 591, 856.

Soil, 32, 51.

Solidarity, 59, 154, 437, 548, 592, 754 856; of sex, 517, 529.

Song. *See* Music.

Sons, position of, 504.

Souls, belief in, 700, 704, 711, 717, 733; doctrine of, 701; transmigration of, 719. *See* Religion.

Spencer, H., erroneous views of, 281, 316, 533, 734, 735.

State, 753 ff., 761, 762.

Steppe region, culture of, 74.

Story-telling, professional, 602.

Stoicism, 222.

Suggestion, 287, 545, 560, 617, 630, 635, 689.

Taboo, 147, 184, 229, 258, 264, 512, 729, 765, 795.

Tattooing, 556, 622.

Technic areas, 39.

Technogeography, 29, 130.

Technology, 335.

Telephonic contrivances, 126.

Temperament, influence of cattle-breeding on, 94.

Tools, 30; and agriculture, 96; and art, 573; as ornaments, 554; types of, 335.

Totemism, 132, 183, 244, 246, 520, 727. *See* Dances, Names, Religion.

Trade, 35, 112, 557; as means of political power, 757; routes, 125, 306.

Trading peoples, 122.

Tradition, 132, 149, 150, 152, 311, 427, 613; and reasoning, 151. *See* Myth.

Transportation, 126.

Travelers, instructions to, 873.

Tribal organization, 62, 77, 462, 803, 823.

Tribute and taxes, 128.

Truth, conception of, 202.

Vanity, relation to clothing, 551.

Variability, 173, 194.

Vegetarianism, 98.

Wants, 30, 544.

War, 373, 374, 621, 661, 679, 758; and art, 625; and leadership, 821; influence of, 613, 622, 753, 759, 769, 821; mimic, 623; songs, 623; women in, 658.

Weapons, as ornaments, 554; classification of, 374; defensive, 374; offensive, 385.

Wealth, and art, 545.
Weighing, 359.
Wheel-carriages, origin of, 399, 403.
Wind-power, 369.
Witchcraft, punishment of, 832. *See* Magic.
Woman; and altruism, 197; attitude toward marriage, 532; control of, 525, 549, 802; language of, 521; magical practices of, 681; occupations of, 109, 265, 285, 503, 658, 825, 853; position of, 90, 107, 511, 519. *See* Marriage, Sex, Segregation, Solidarity.
Zones, anthropological, 38.
Zoöculture, 69, 73. *See* Animals.

/572T368>C5/

Library Bureau Cat

DATE DUE

572
T368

55800

c.5

Thomas Source book for social origins